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Department of Agriculture, Madras.

Vol. III, Bulletin No. 60.

CATTLE OF SOUTHERN INDIA

BY

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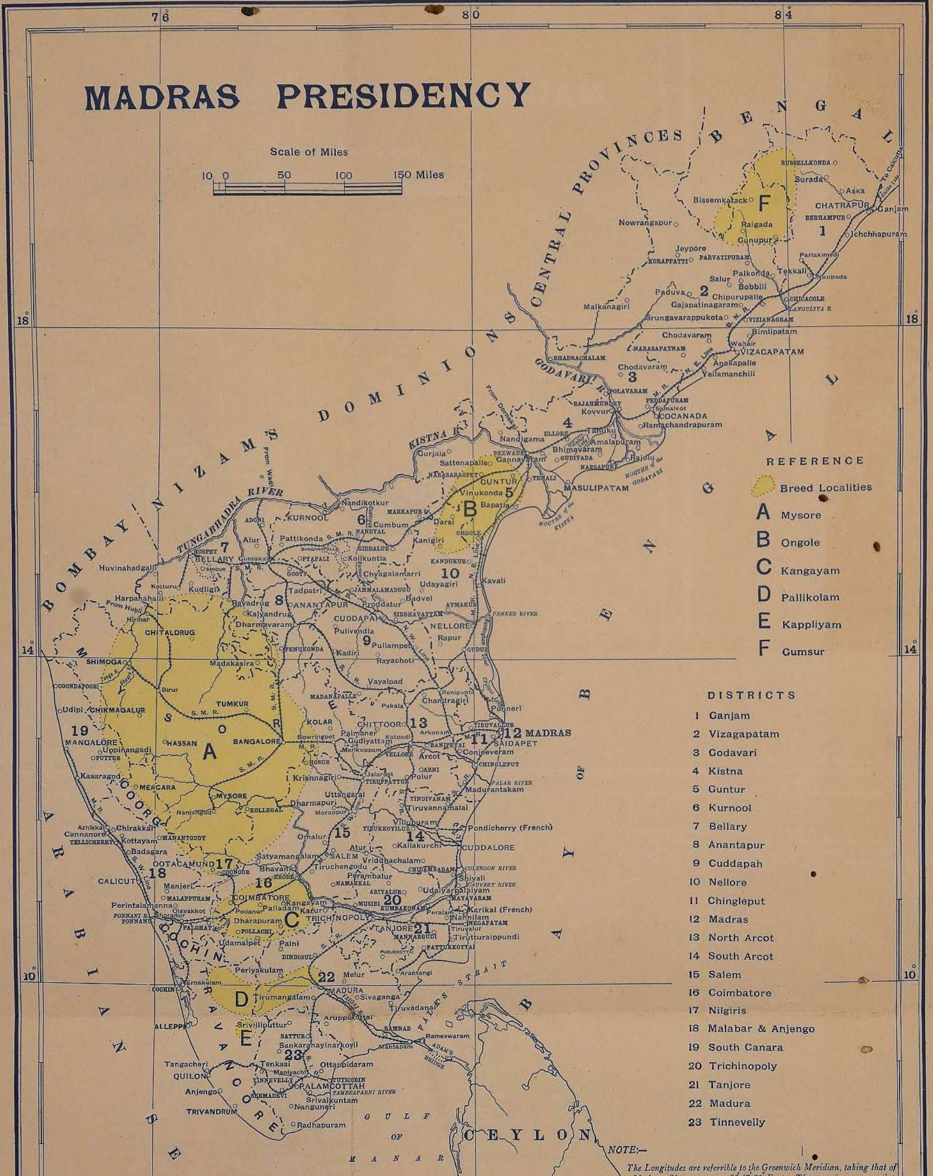

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CATTLE OF SOUTHERN INDIA.

THE cattle of the Madras Presidency have long been famous, and of the several breeds which are to be found in this part of the country those designated the "Mysore," and the "Ongole"—sometimes also known as the "Nellore," are undoubtedly pre-eminent. On account of its prepotency the former is most assuredly entitled to first honours as a visit to all the various large cattle fairs held in the southern districts of Trichinopoly, Madura, and Tinnevelly, also in the more northerly districts of Anantapur and Bellary will show how predominating is this type.

The "Ongoles" are very beautiful in appearance, and for their special purpose are unsurpassable, but they differ in almost every respect from the Mysore. They are huge in size, extremely docile, and suitable for steady heavy draught, whereas the Mysore cattle are specially adapted to road work, as they are quick, very high spirited, and have extremely hard sound feet.

Indian cattle, like those of Europe, vary in most districts either as to size, form, and symmetry, or as to the growth and length of their horns, according to the varying local peculiarities of the climate, soil, and lastly, but not least, fodder. It may be stated that both natural and artificial fodder tends to influence the form, size, and character of the animal. Ordinarily the native who lives on a meal of rice, and perhaps a few herbs to season the

same with, expects that his cattle will, in like manner, pick up what they can in the way of pasture about the village or its adjacent lands, so that he never troubles himself to grow green food, or prepare dry fodder for them ; the same plant which supplies him with grain feeds his cattle also with its straw. In most towns and villages cattle are driven out at all seasons to graze abroad, and in the dry season they more frequently lick the dust only, and return home with their stomachs as empty as when they started, to receive perhaps a few handsful of straw or rubbish just sufficient to sustain life.

Madras is essentially a cattle-raising province, and consequently the animal wealth is enormous, but, as in other presidencies in India, large herds of village or mongrel cattle are to be met with everywhere. Many of them are worthless, being too weedy even to put into the lightest plough, and they are allowed to exist and eat the ration of the more profitable ones. Undoubtedly religious sentiment among the vast majority of the people is averse to destroying cattle, as among the Hindus the bull has always been considered to be sacred, and indeed is worshipped under the name of *Nundi*, it having formed the vehicle of their deity Shiva during his peregrinations. A Hindu would consider it a most grievous sin to kill them, and utter pollution to partake of their flesh, yet he freely partakes of their milk.

The three great centres of cattle raising are shown in the accompanying map, and from these they are taken by dealers, who form a very large community, to the numerous annual and weekly markets held in this presidency. For guidance a list of the fairs and the markets held weekly, also the approximate number of animals which are brought for sale, has been added at the end of the paper. Frequently these drovers have their regular

customers, and they receive payments by instalments, but this custom is principally limited to the north and western districts. Mysore has enjoyed from a very early period a just renown for a superior breed of cattle. The generally mild and salubrious climate of the plateau, with an extensive pasture on which cultivation has not made much inroad favoured cattle breeding, and attracted Gollas and other nomadic tribes from the north, who brought with them their excellent breeds which, being established for generations in the country, and mixing with the indigenous population, could not fail to improve them. In a country in which 90 per cent. of the population subsist by agriculture, and in which cattle play a most important part, a demand for them is never wanting. Cattle manure is used as fuel or serves to enrich the soil exhausted by cultivation. The operations of ploughing, harrowing, sowing, and thinning the crop, of lifting water from wells for irrigation purposes are carried on almost entirely by bullock power. The crop when cut is removed to the threshing floor, and there trodden out by the cattle, and transported by them to the market; and in fact it would be difficult for the Indian cultivator to get on without his cattle which indeed constitute the life and soul of agriculture. The substance of the ryot is usually estimated by the number of cattle he owns, and the number of ploughs he works. Moreover cattle are intimately associated with the domestic incidents of the people. The present of a cow with a few acres of land to the bridegroom is a noticeable part of the marriage ceremony. The present of a cow and land is also part of the Brahminical obsequies. As a propitiatory offering, when a relation has died, a young bull is presented to the deity to be eventually turned loose into the herd to eventually become a sire.

Mysore Breeds.

All over the presidency so far as cattle breeding is concerned two descriptions of cattle exist side by side, and this is particularly noticeable in Mysore, and also on the East Coast where the Ongole breed are to be found. The first is known as *Nadudana* or *Natudana*, really village cattle, which are by far the most numerous, of small size, compact frame, and various colours; every village in the province teems with them. They constitute the bulk of the agricultural stock, and are the main source of the dairy supply, such as it is. The second is termed the Doddadana meaning large cattle, and consists of the less numerous but more efficient and valuable kinds, of more uniform size and colour; they are more often used in conveying the traffic of the country than in agriculture, and are largely sold in cattle markets. Doddadana and Nadudana are particularly Mysore terms. The Doddadana embrace the Amrat Mahal, Hallikar, Chitraldroog, Alumbadi, or Mahadeswarabetta, and kindred breeds. Cattle of this description are only owned by well-to-do ryots and breeders. There are professional breeders, but every ryot who has a little capital adds to his agricultural occupation that of rearing a few head of cattle. There are parties who keep their herds of cows and bulls for breeding purposes mostly in the vicinity of grazing hills and lowland forests. Calves of a year old or so are bought from them by the ryots, who attend them with much care for two or three years, and exhibit them for sale to the best advantage at the cattle fairs.

The whole breeding operations of this country are carried on by means of three descriptions of bulls:—

(*a*) Choice specimens of the *Doddadana* breeds, either kept in villages and homefed, which are licensed to

graze on village crops or may be kept in the herds, and freely moving with them in their jungle pastures; these may be styled *special superior breeding bulls.* The large majority of these have been dedicated to temples, and are thus held to be sacred.

(*b*) The calves of *Doddadana* bought when young and reared in villages, destined for agriculture or sale after castration, but employed as sires meanwhile. These may be styled *casual good breeding sires.* They are moderately good though inferior to the first named for breeding, and being permitted to cover before castration they make, it is said, less efficient agricultural and draught cattle.

(*c*) The numerous small sized and more or less ill-shaped young males of the "Nadudana" class herding with the village cattle, and these undoubtedly lead to degenerate breeding; these may be called *Nadu bulls.* Nadudana or village cattle are left entirely to the course of nature without any control, and without any of those artificial restrictions by which alone a breed can be saved from degeneration. Seldom is any selection made of breeding cows and bulls with reference to their fitness for producing a healthy progeny. Nor are inferior and defective bulls generally castrated; and the common practice of driving all the village cattle, male and female, together in one herd leads to indiscriminate breeding.

In some parts however it is the custom for one or two villages to club together and subscribe for a superior bull which is carefully selected and purchased when young. It is the common property of the villagers, and being allowed every license, even to the extent of grazing on private fields, keeps in excellent condition. Such bulls follow the herd during the day, and being accustomed to graze on rich crops seldom pay heed to the

poor grazing on the village common. They run to the field crops and graze their fill either after the herd returns home for the night, or before it is let out in the morning. With the better class animals great care and attention is paid to the selection of both cows and bulls, and the conditions under which they are reared afford facilities for the regulation of breeding. Cows of the *Doddadana* are kept in the villages, they are homefed and under shelter, in which case only the very best bulls are secured for serving them. Each herd has its own special superior bull sometimes selected from the same herd, but more often from some other herd to prevent in-and-in breeding. As the bull grows old and deficient in vigour, a young bull is similarly selected and kept in the herd to take its place. The young one in many cases only acts the part of a teaser. No sooner does it apperceive symptoms of a cow being in heat than it approaches, and then keeps constantly attending on it. The skittish habit of the cow, being tired of the importunity seeks the protection of the elder bull which the young one dare not approach and which then serves the cow. It may be of interest to know what the breeding experts consider to be the best points of a Mysore bull of the best quality, and these, though they cannot be met with in a single specimen, are more or less searched for in all careful selections :—

(1) A long and stretching frame.

(2) A good height—say 52 inches measured behind the hump.

(3) A long and tapering head, with a narrow and prominent forehead.

(4) Small but prominent and bright eyes.

(5) Small and erect ears.

(6) Thin, fairly long and graceful set of horns, the difference between their thickness at the base and at the end being small.

(7) Strong fairly long neck with a small well shaped hump.

(8) Thin and short dewlap.

(9) Broad and full chest.

(10) Well formed and strong shoulders and hind quarters.

(11) Strong and well rounded ribs.

(12) Level back and broad loins.

(13) Narrow flanks.

(14) A level croup. An abruptly falling croup being condemned ("goose rumped" in horsey phraseology).

(15) A thin short whip like tail reaching to or very little below the point of the hock.

(16) A well projecting anus ring, so that the ejected dung may fall clear of the body. It should not be situated in a niche-like hollow, as in cows and old animals.

(17) A sheath having a little or no pendulous growth.

(18) Legs of medium length and well proportioned, having strong and fairly thick bones and moving with a swing in perfect rhythm, and straight not turned sideways or brushing against each other.

(19) Short fetlocks, and hard and small hoofs with equal halves having a very narrow cleft between them. A long shank bone is considered a weakness.

(20) The colour of the horns, hoofs, muzzle and skin should be black.

(21) The skin should be thin and satiny, having short and soft hair. Bluish and iron grey colours are preferred.

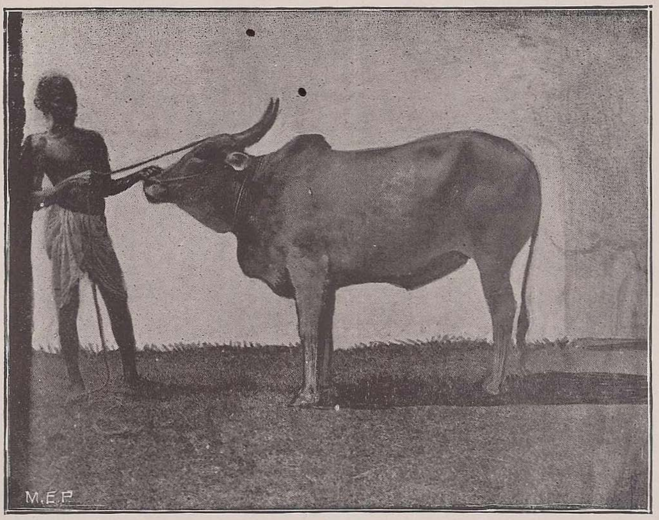
(22) A compact body free from all pendulous growths.

(23) The animal should be sound in every way, of symmetrical features, of good temper and pure breed, and free from hereditary diseases. In the selection of the cow no such special attention is bestowed as in the case of the bull, which, considering the number of animals it is likely to influence, is most carefully selected. The main points looked for in cows are good size, length, shapely head, and horns, broad hips and loins, and nice colour.

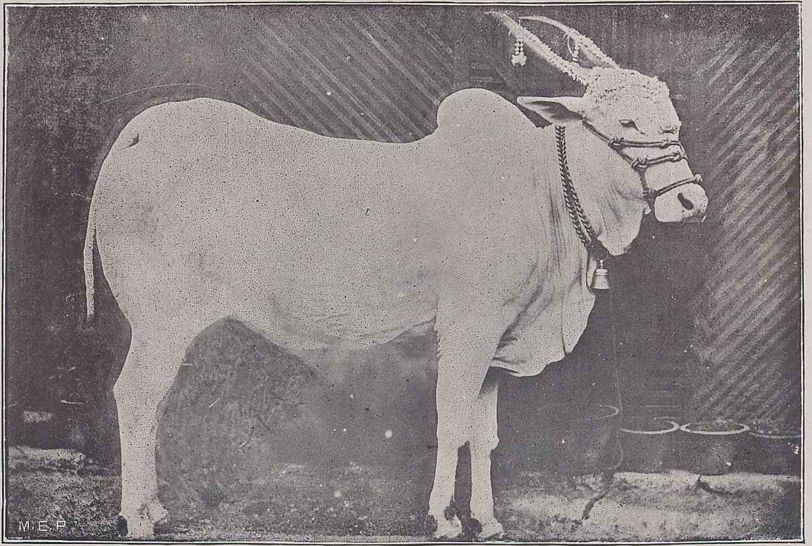
Amrat Mahal Breed.

Among the breeds found in Mysore the first place is undoubtedly due to the Amrat Mahal. The Amrat Mahal, literally Milk Department, is an establishment for the breeding of a race of cattle peculiar to the country of Mysore, and the present cattle comprise three principal varieties called Hallikar, Hagalvadi and Chitraldroog from the districts which originally produced them, and so distinctive is this breed that they may readily be distinguished from every other breed in India. The different breeds composing the present Amrat Mahal cattle owe their origin to the cattle of the tribe of Gollas and their sub-tribe of Hallikars who, with their superior cattle, are believed to have migrated in ancient times in several successive waves from the north, and settled in different parts now comprised in the Chitraldroog and Tumkur districts.

The *Karuhatti* establishment of the Vijayanagar Viceroy (some time between 1572 and 1600) at Seringapatam consisted of Hallikar cows imported from Vizianagar. This may be said to be the nucleus of the Amrat Mahal cattle. The Seringapatam cattle passed into the hands of the Wodayars of Mysore, some of whom,



Mysore Heifer.



This was the favorite Cow at the Mysore Palace.

notably Shamaraj Wodayar (1617—1636), Kantirava Narasa Raj Wodayar (1638—1658), and the celebrated Chikka Devaraj Wodayar (1672—1704) made their own additions to them from time to time, assigning "Kavals" in different parts of the kingdom. It was in Chikka Devaraj Wodayar's time that the cattle establishment obtained recognition as one of the departments of the administration. It was called "*Benne Chavadi*" or establishment of cows both as a breeding stud and to furnish milk and butter for the palace. He introduced for the first time the system of branding them with his initial ದೆ (Dé). The accumulated herds of the Rajas of Mysore passed on to Hyder Ali when he usurped the throne. In extending his conquest, and in reducing the numerous rulers who had held sway over more or less extensive tracts in Mysore, he acquired also the herds of the superior cattle belonging to them. Among these may be mentioned the Pollegars of Chitraldroog, Tarikere, and the Raja of Nagar. Hyder seems to have made extensive use of the cattle which he had appropriated in the movements of his army equipage, and is popularly credited with having kept at least 60,000 bullocks in different parts of the province, though they were not organised as carefully or in as minute details as was afterwards done by Tippu, on a system which has, in essential points, been adhered to ever since. Upon succeeding to the throne of his father Tippu added to these herds those of the Pollegar of Hagalvadi, Chikka Devaraj Wodayar's and the suggestive name of "*Benne Chavadi*" was changed in his time into the more pompous one of Amrat Mahal from *Amruta* :—nectar. Tippu took great interest in these cattle and issued a "*Hukumnama*" or regulations for the department, the greater part of which continued to be observed after

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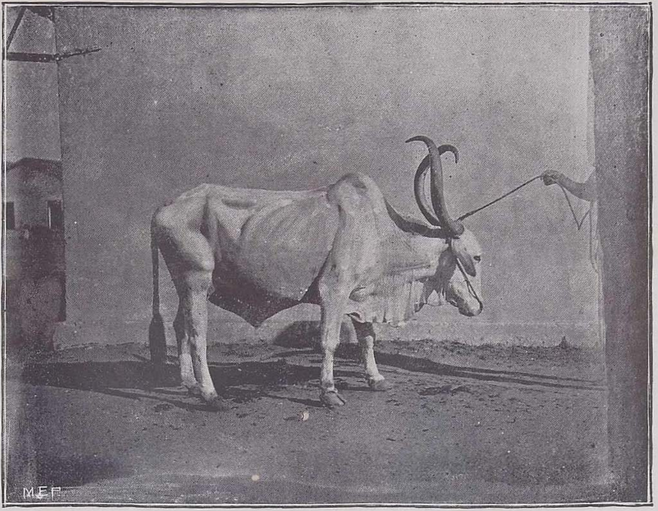
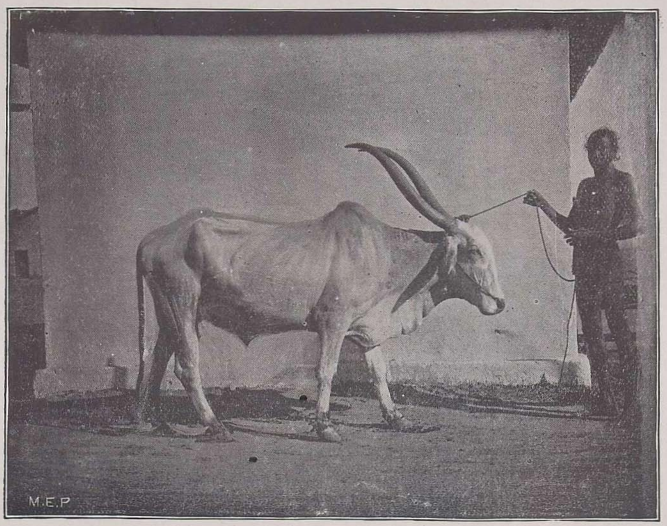
the taking of Seringapatam, and the same system was afterwards followed by the British officers. The Dairy department seems to have been on a large scale. The *Amildars* were expected to train the young bulls. These were given absolute freedom and were allowed to graze in the ryots' fields. They were afterwards classified when they were required as gun bullocks, pack bullocks and plough bullocks, etc. There was an annual muster of the herds, and Tippu frequently attended it in person and distributed rewards. Such was the composition of the Amrat Mahal cattle inaugurated by Chikka Devaraj Wodayar, reconstituted by Hyder Ali, and thoroughly organised by Tippu Sultan.

The attention of the British was first called to the excellence of the breed when it enabled Hyder Ali to march 100 miles in two days and a half to the relief of Chellumbrum, and after every defeat to draw off his guns in the face of the enemy; and when Tippu Sultan was enabled to cross the Peninsula of Southern India in one month for the recovery of Bednore, and to march 63 miles in two days before General Meadows. It also enabled the Duke of Wellington to execute those marches of unexampled rapidity which are the admiration of military men, and the Duke brought it prominently to the notice of the then Commander-in-Chief Lieutenant-General Stuart. Captain Davidson, in a report on the Amrat Mahal cattle attached to the Bombay column of the English Army in Afghanistan in 1842, says:—" No draught cattle in either army were so efficient as the 230 Mysore bullocks which accompanied the Bombay troops to Afghanistan. It was entirely due to this very superior description of cattle that no part of the Bombay Park was required to be abandoned when the troops were returning to India over the almost



Amrat Mahal Bull.



Amrat Mahal Bullock.

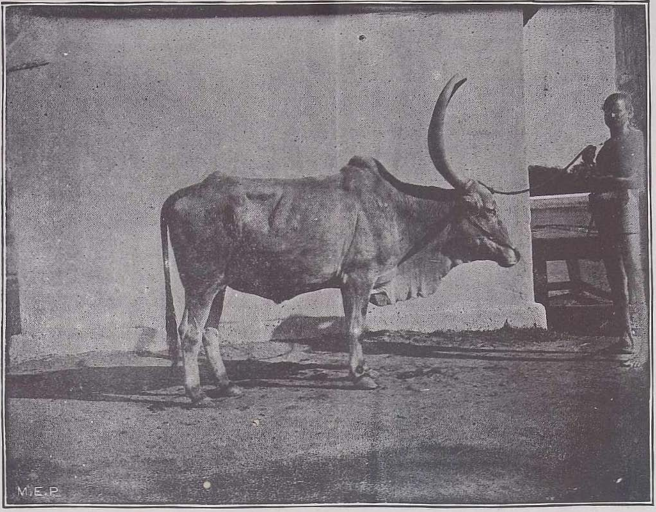
impracticable roads through the Tirah Mountains. These cattle were frequently upwards of sixteen hours in yoke. The draught bullocks of the Bengal army were the property of Government, and were not in my opinion as fine animals as the Mysore bullocks." Other memorable military events might also be cited to the credit of the Amrat Mahal cattle. It is said that during the Peninsular War the Duke of Wellington often regretted that he had not the services of the cattle of this breed. In 1808 the Commissioner of Mysore said of them :—They are active, and fiery, and walk faster than troops ; in a word they constitute a distinct species, and are said to possess the same superiority over other bullocks in every valuable quality that Arabs do over other horses. Professor Wallace remarked in 1899, that the breed as a whole occupies among cattle a position for form, temper and endurance strongly analogous to that of the thorough bred among horses.

On the fall of Seringapatam the whole of the cattle became the property of the British Government, the management of the herds being allowed to remain with the Maharaja of Mysore on the condition of his supplying a certain number of bullocks. It was probably imagined that the same attention would be given to the establishment as has been extended to it by the former Government, but Tippu Sultan had depended upon it for the efficiency of his army, and the new Government could be actuated by no such motive. The consequence was that the establishment was left to the servants who had charge of it, and by them neglected and abused ; the British Government were disappointed in their expected supplies, and the cattle were allowed to degenerate to such a degree that after a period of thirteen years it became necessary to resume charge of it in order to

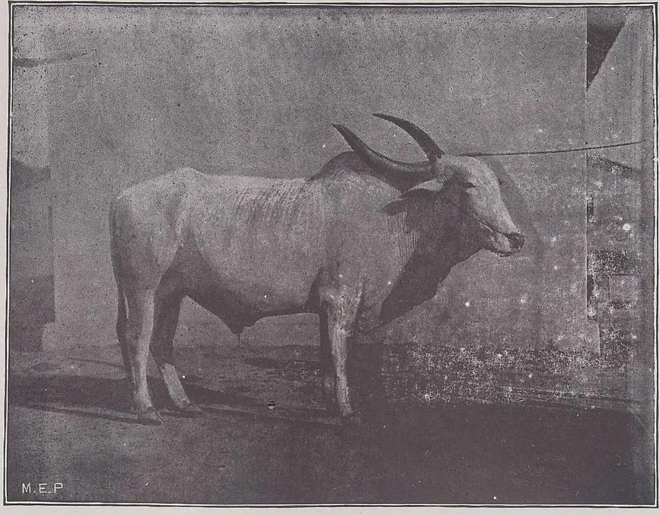
preserve the breed from extinction. In 1813 the Amrat Mahal cattle, together with the pasture lands were handed over to Captain Harvey of the Madras Commissariat. The herds then rapidly improved and doubled in numbers in the course of but ten years. In 1840 the Maharaja's Amrat Mahal herds and grazings were amalgamated with those of the British Government, and the whole placed under the orders of the Mysore Commission. In 1860 from motives of economy Sir Charles Trevelyan ordered the establishment to be broken up, and the herds to be sold ; this appears to have been a fatal error, alike in policy and economy, and the results were fatal to the public service. The price of cattle soon became prohibitive (Rs. 150 each) and it was, with the cordial approval and assistance of the late Maharaja, re-established in 1866 by the purchase of such cows and bulls of the old breeds as were procurable in the Mysore country ; very few were obtained owing to the Pasha of Egypt having secured most of the best blood. Fortunately however the late Maharaja was a large purchaser when the old establishment was broken up, and the Madras Government was able to obtain sufficient stock to fairly start again in 1870, the complement being 4,000 cows and 100 bulls.

In 1883 the British Government handed over this valuable property to the Government of His Highness the Maharaja for two and a quarter lacs. It is now entirely under its control, and every effort is made by careful elimination of doubtful stock to restore the old breed to its former excellence.

Stud books have been opened, and the cattle are mustered by name and brand. Births and deaths are registered and reported in monthly returns, and frauds on the part of subordinates have been to a great extent



Amrat Mahal Bullock.



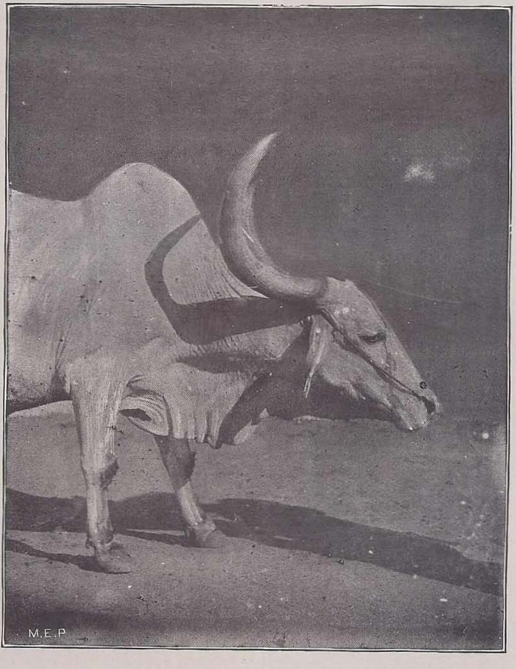
Amrat Maha Bullock.

prevented. The Madras Government receive from the establishment 200 bullocks annually. Private individuals may obtain bulls by writing to the military adviser to the Government of Mysore, Bangalore, the prices of which are about a hundred rupees each. There is frequently some delay in procuring them, as the herds have to be rounded up, the young bull selected and secured, after which they undergo a process of training. This is very necessary as they have been living in practically a wild state.

As has already been stated the cattle of this breed originally comprised three varieties: 1 (*a*) Hallikar, (*b*) Hagalvadi and (*c*) Chitraldroog. Prior to the abolition of the department in 1860, the several herds seized by Hyder and Tippu Sultan seem to have been maintained for the most part unmixed as separate "Serwés," the distinguishing peculiarity of each breed being thus kept unadulterated. In 1866 when the department had to be reorganised by repurchasing the stock it was found impracticable to get back in their original purity all the cattle sold six years before. At this juncture the men, to whom the work of collecting the cows was entrusted on promise of appointing them "Serwegars," freely mixed the three main varieties of the old Amrat Mahal. A large number of inferior cows of every other breed, including their own bred cattle known as "Swanta Gosu" (mixed breed), and a large number of the Mahadeswar-betta cows are also said to have been passed off for the reconstruction of the Department. During recent reductions and reconstitutions of "Serwés," since 1877, many herds have been broken up and distributed among others, new herds have been formed out of the excess stock of the old ones, and exchanges of stock are often being made between different "Serwés" all tending to promote

mixture. At present the Amrat Mahal breed cannot be said to be as pure as it was prior to 1860, although careful selection and uniformity of treatment in recent years seem to have erased a good many points of difference, which must have necessarily existed at the time of reconstitution of the herds in 1866. The different breeds of Hallikar, Hagalvadi and Chitraldroog vary but slightly, their general characteristic being the same. Some special characteristics developed by local peculiarities in the different herds may however be noticed. The cattle reared in the "Kavals" or reserved pastures are of much larger size than those found in the north. They are more bony, carry thicker and rather less gracefully set horns, having comparatively thicker tails; their hoofs are said to be not so tough as those of cattle in Chitraldroog from which they differ in having a somewhat pendulous sheath and dewlap. The cattle in the Tumkur, Hassan, and Kadur districts, though slightly smaller in size are very much like those of the Amrat Mahal. The herds of the eastern parts of the Chitraldroog consists of cattle of smaller size but more compact and hardly frame with a finer tail, thinner and more gracefully set horns, and stronger hoofs. The cattle of the western Chitraldroog and Channagiri taluks resemble the last named variety, and differing from them only in being slightly bigger in size.

The Amrat Mahal cattle are kept in their grazing grounds which are called "Kaval" about 210 in number, and these are distributed over the greater portion of the western and central parts of Mysore, and cover an immense tract of country. They comprise varieties of soils, often undulating and covered with scrub jungle growth. The cattle feed on various grasses, though "vunaga' (*Heteropogon contortus*) is by far the most



Amrat Mahal Bullock.

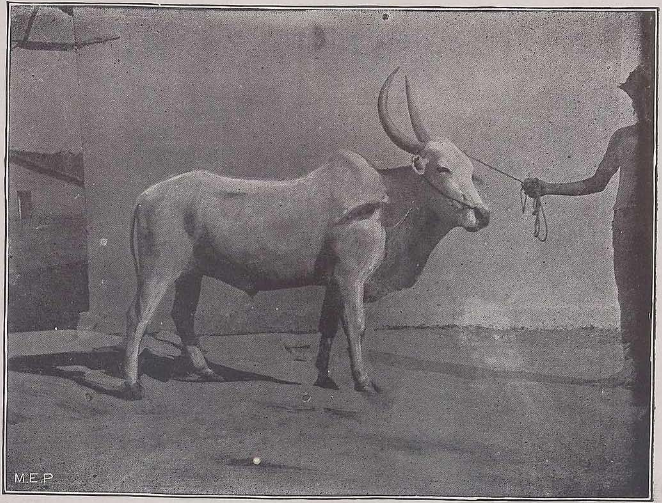
predominant. The grazing in the Kavals situated in the valleys is most nutritious. As the country becomes more elevated the grass becomes more scanty, and inferior in quality. The "Kavals" are divided into (*a*) hot weather, (*b*) wet weather and (*c*) cold weather Kavals" according to the season of the year at which they are most suitable for grazing. The hot weather "Kavals" are generally in the beds of tanks in which grass springs up during the hot months, and where generally there are trees capable of affording shade to the cattle during the heat of the day. The cold and wet "Kavals" are those where grass dries up during the hot weather. The cattle are driven for about four months in each year from May to September to these "*malnad* kavals". The herds in the west are taken to the south-western jungles on the Coorg frontier, and those in the north to the Lukkavalli and Channagiri Forest "Kavals" in the Kadur and Shamoga districts; where the first showers of the advancing monsoon ensures an early and abundant growth of grass. They then return to their maidan, or plains "Kavals" about the beginning of September in each year when the supply of grass is plentiful all over Mysore.

The whole of the cattle are divided into "Serwés" or herds, each of which, with attendants attached to it, is kept separate and distinct. The establishment of each herd is fixed at two hundred breeding cows, one hundred heifers, twelve bulls, and twenty "Peshros" or leaders, with the calves of both sexes and all ages, the actual produce of the herd the number of which varies according to circumstances; but which, generally speaking, raises the total number, of animals in each herd to five of six hundred head. Each "Serwé" orherd is placed in charge of a "Serwegar" assisted by two "Mundals" each of

whom is responsible for the proper management of the cattle under his charge. An establishment of graziers and other attendants is likewise attached to the herd. The number of "Kavals" allotted to each herd varies from three to nine according to the size of the "Kavals," and the quantity of pasturage they afford, and although the herds are not supposed to be permanently attached to particular "Kavals" still they are not removed from those which have been allotted to them without special reasons. The whole of the herds are divided into fourteen "Tukries" or divisions, some composed of two and others of three herds, the "Kavals" belonging to each herd being, of course, conveniently situated. Each Tukri is placed under the superintendence of a "Daroga" whose duty it is to frequently inspect the herds, to muster the cattle, to check, and report all irregularities on the part of the attendants in charge of them, and also to arrange as far as may lay in his power any difference which may rise with the inhabitants or local authorities. At the annual inspection of the cattle which takes place in the vicinity of the grazing farm in the months of July and August each herd is separated, carefully examined, all inferior cattle removed, and unmarked cattle branded.

Early castration is the rule in the Department, and the calves are castrated when they are eighteen months old in the cold season.

The bullocks are separated from the herds after four years of age, and those sold to the Madras Government are transferred to the Public Cattle Department at Hunsur and when turned five years old they are thoroughly trained to work. They are in their full vigour at seven years, and past it at twelve. They work until they are fourteen or fifteen, after which they rapidly decline and die at about eighteen years of age.



Amrat Mahal Bullock.

As may be gathered from the foregoing the cattle of these herds are kept in a semi-wild state. They are kept in the open, and all the protection or shelter they are afforded from the midday sun and rain is that of trees. They roam about in unrestrained freedom in their vast "Kavals" to the great benefit of their health and limbs. This mode of treatment and rearing in a state of nature kills weaklings, and produces a hardy stock barely possible in an artificial method of breeding. The cattle being thus brought up in a hardy fashion, and segregated from village cattle are very rarely attacked by the several forms of contagious disease.

In disposition the cattle are wild, unruly and impatient of the presence of strangers; it requires several months of kind treatment and patience to break them in. For days together they are kept on starvation allowance of fodder, and when they are weak and subdued they are gently handled by the keeper, to whom, by degrees, they become accustomed. They require to be gradually habituated to the yoke, and harsh treatment only makes them stubborn. Such is the history of this famous Indian breed, and I am mainly indebted to Mr. A. Krishnaswami Iyengar for the information on the subject which is contained in his notes on Mysore cattle.

As dairy stock, the cows are insignificant, being very poor milkers. The whole of the milk, being even then barely sufficient—is left to nourish the calves, other use of the milk being strictly forbidden. Good cows yield about one seer each time, *i.e.*, twice daily, allowing as much for the calf. The milk is very rich and sweet. It is said that heifers in the Mysore district generally give birth to their first calf in the sixth year and are termed Mukkundies. In the Hassan, Tumkur and Kadur districts they reproduce for the first time in the fifth year, and are

then said to be Ikkundis. Those in the Chitraldroog district and Channagiri taluk are regular "Varshakundies," that is, they commence calving in their fourth year. This information is, I feel sure, very unreliable as circumstances alter cases very considerably. Provided that the heifer is well fed from birth she will probably come in season at the end of her first year, and generally speaking in a year of good rainfall the heifers come into season quite early. Twenty cows are allowed to one bull. The bull is not used until he is five years old, and is said to retain his vigour until he is ten, after which it is castrated and discarded from the herd. It is said that cows, although in good condition, do not get in season while in their Malnad "Kavals" owing to exposure to rain and wet, but when they are turned into their "Maidan Kavals" they breed in large numbers. The most favourable time for breeding is when pasture and water are abundant, and the most favourable months for births are January and February, and from August to December.

The calves remain with their mothers during the day, but are separated from them at night and are sheltered in folds. When they are three months old they are able to graze and commence to subsist on pasture. In the cold season when the herbage is abundant they are generally weaned when five months old ; such as are born later in the year cannot be separated from their mothers until after the hot weather. After separation care is taken to conduct them to the richest pastures in the neighbourhood, but they are not supplied with food beyond what they can graze on pasture.

The average prices may be stated to be as follows :—

Very good breeding bulls Rs. 80 to Rs. 130, average bulls from Rs. 50 to Rs. 65. Very good cows Rs. 60

Mysore Bullock.

to Rs. 90, average cows Rs. 40 to Rs. 60. A pair of first-class bulls are said to fetch in Hyderabad as much as Rs. 500 and even Rs. 800. People in the Dharwar Collectorate eagerly seek these cattle and pay good prices for young bulls from two to four years old even as much as Rs. 100 to Rs. 150. It was said that a pair of bullocks was sold there for Rs. 800 having won a race in dragging a heavily laden cart through sandy soil.

The "Serwegars" of the Amrat Mahal Department have been allowed the privilege of keeping their own cattle with the Government herds with the consequence that the Amrat Mahal bulls have crossed the Nadudana cows and the result has been mongrel, and these, from long association, have taken on all the characteristics for the Amrat Mahal. They are now known by the name of Egosu or Swantagosu cattle.

Hallikar Breed.

The history of this breed has already been given under the head of the Amrat Mahal cattle of which the Hallikar breed is the most important and valuable member. An absurd legend is current among the herdsmen of the Department regarding the origin of the Hallikar. They state that Hyder Ali, after one of his trips to the south, brought back to the Mysore country a number of the cows of the small Brahmini caste. These cows were turned loose in a "Kaval" in the Tumkur district in which there were great numbers of antelope, and a cross between the big black buck and the small Brahmini cows gave rise to the present Hallikar breed. In support of this statement they point to the small spot below the inner canthus of the eye which is common to the antelope and the Hallikar cattle. It is curious that while the name of Gollas has disappeared among cattle

that of Hallikar, their sub-tribe, has survived in the cattle which they introduced into Mysore. Hallikar cattle, besides chiefly comprising the Government Amrat Mahal herds, are to be found in Tumkur, Hassan and Mysore districts, the cheif centres being parts of the Nagamangala, Kunigal and Gubbi taluks. The area over which the breed prevails is not by any means extensive, and it is thinly scattered even within those limits. The reason is that there are no extensive pasture lands in the habitat of these cattle, and the tracts being populous they are mostly homefed and are not maintained in large numbers except by a few breeders in the taluks just named. They are frequently bred by small ryots who have only a few cows, and special attention is paid to the mating of the cows and the rearing of the young stock.

Mr. Wallace in his "India in 1887" gives an excellent description of the breed. He says:—The head is well shaped, long and tapering towards the muzzle which is generally black, the forehead bulges out slightly, and is narrow and furrowed in the middle. The horns are unique in shape, and differ considerably from most other breeds. They are usually large, set well back on the crest of the frontal bone; springing close together, they diverge, inclining backwards each in a straight line for nearly half their length, and then with a gentle and graceful sweep bend forwards usually lightly inclining inwards towards their points, which are black tipped and exceedingly sharp. At times when the head is down, as when feeding, the horns can almost touch the neck in front of the hump. They thicken gradually as the head is approached, and are very strong near the base which seems to extend, apparently to give strength, down the forehead between the eyes as a distinct ridge on each

side, thus forming a perpendicular groove or depression in the centre of the forehead.

The colour is of a more or less uniform grey, varying from light to a deep iron grey with a darker shade over the shoulders and hind quarters. Broken colours are being carefully weeded and sold. The neck is thin, for the size of the cattle, but is long and sinewy. The dewlap is thin, and does not extend very far back. The ears are small and taper to a point, being carried in a horizontal position.

The hump is well developed in the bull. The tail is thin, and tapers like a whip. The legs are clean, strong and sinewy, standing well apart. The hoofs are small, well formed, black and hard, with a very close cleft between. This breed seldom attain a very large size. In shape they are remarkably neat, with muscles like whipcord.

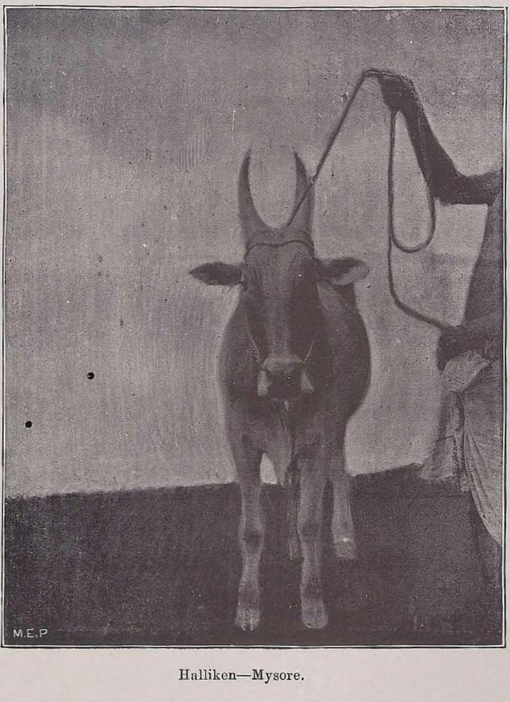
The cows have a very masculine appearance and vary only with having a thinner hump and horns. In colour they are invariably of a light grey. They have a small compact udder with small and hard teats. They are poor milkers, though the milk is rich and sweet with a high percentage of butter fats. They are of high mettle, and, though mostly homebred, are not gentle or tractable.

There is always a great demand for these cattle, and as the number annually produced is not sufficient to meet it, high prices prevail. The average market value is: Very good breeding bulls Rs. 80 to Rs. 120, average bulls Rs. 50 to Rs. 75. Very good cows Rs. 60 to Rs. 100, average cows Rs. 40 to Rs. 60. Bull calves of one year Rs. 20 to Rs. 40.

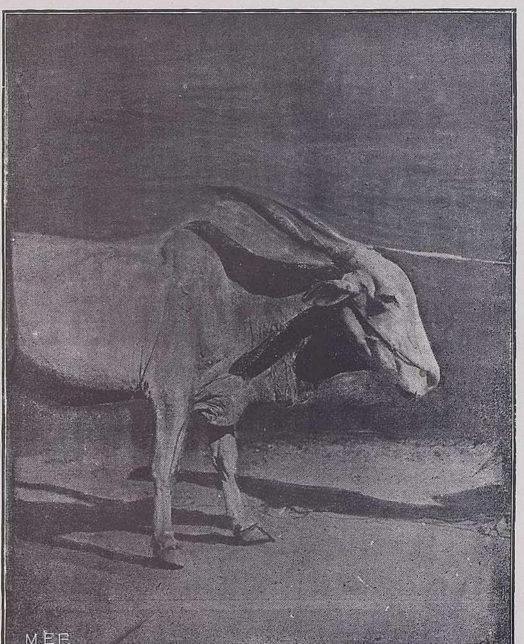
Gujmavu is the most valuable variety of the Hallikar breed, and it is to be found at Karadahalli in the

Nagamangala taluk. Good Gujmavu cows of this locality are little different from the Amrat Mahal cows. The shape of the head, face, muzzle, eyes, ears, horns, neck, legs and barrel is exactly of the same type. The similarity extends even to the masculine look of the cow. One peculiar point which is very highly prized in this variety is the very long back which is supposed to give them a greater mechanical strength and advantage. The cattle owners of Karadahalli treat their animals after the fashion of the Amrat Mahal Department, they send their herds to distant jungles in the Heggadevankote taluk for the benefit of the early season pasture.

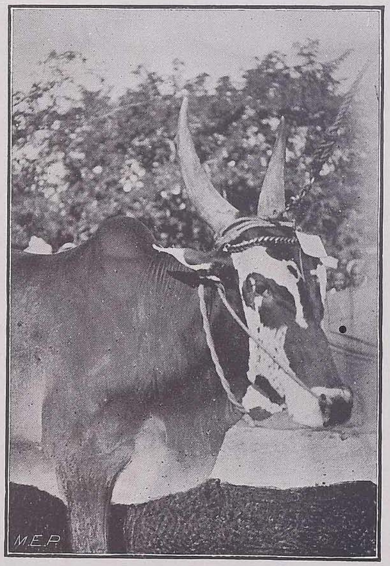
Superior bulls are kept at Karadahalli for breeding purposes. Cows, even from distant places, are taken to these bulls for service upon payment of a fee from Re. 1 to Rs. 4 for each service. It is said that so highly are the Gujmavu prized that ryots of the neighbouring taluks of Mandaya, Seringapatam and Closepet advance to the breeders of Karadahalli Rs. 50 to Rs. 100, for calves still in the mother's womb. If a cow calf is dropped the advance is returned, as it is not customary for the breeders of Karadahalli to sell the cows of their breed. If a bull calf is born it is sold according to the original agreement. In some cases such sales are subject to the provision that the calf should be reared for two years, and resold to the original owner for its full value at the time of its resale which is usually from Rs. 100 to Rs. 200. This system of selling and reselling is a common custom and it affords a convenient division of labour. The Karadahalli bulls do not attain a large size, the average height being 49 inches measured behind the hump. They are very difficult to tame at first, but when once tamed they are far more amenable to being handled and worked by men than the Amrat Mahal cattle which,



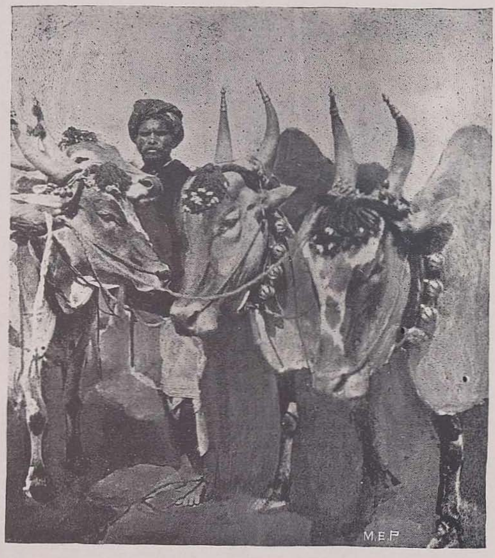
Halliken—Mysore.



Alumbadi Bullock.



Alumbadi Head.



Alumbadi Breed.

to the last, retain more or less their impatience of strangers.

CHITRALDROOG BREED.

The breed bears a close resemblance to the Hallikar cattle differing from them only in some minor points. The head is smaller and shorter than the Hallikar, but not stumpy like the Mahadeswarabetta cattle. The forehead resembles that of the Hallikar though owing to the shortness of the head it does not appear to be so narrow, and the furrow is absent. The horns are thinner, longer, and taper more gradually; but as they grow upwards they get farther apart from each other, and bend forward with a deeper curve. The neck, tail, and dewlap are thinner. White is the predominant colour, and they are smaller in size than the Hallikar.

These cattle are kept in "Roppas" as well as in villages, and are bred and treated in the same manner as the Mahadeswarabetta cattle. Cows of this breed are said to come to early maturity and take the bull when they are two years old, but this is really regulated by the quality and quantity of the food given to them. When the early rains commence all the large breeds are driven to salt lands, and are freely allowed to lick earth salt tending thenceforth to improve their condition by grazing in fresh pastures.

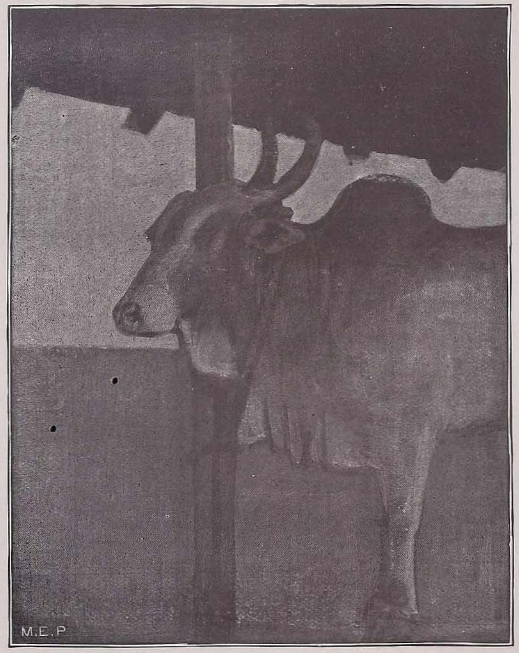
These cattle are, though small, exceedingly active, and are largely used for single bullock traffic.

MAHADESWARABETTA OR ALUMBADI BREED.

This breed derives its name from its chief and fountain market Mahadeswarabetta in the Kollegal taluk of the Coimbatore district, where two large cattle fairs are held in February and in October at which cattle exhibited are mostly of this description. It is also called

the Betsal or Cauvery breed from its hilly home on both sides of the Cauvery, but probably a more common name is that of Alumbadi called after a village of that name on the bank of the Cauvery. The chief habitat of this race of cattle is in the Kankanahalli taluk of the Bangalore district, and the northern taluks of the Coimbatore and Salem districts which are divided from Mysore by the river Cauvery. The reason for these regions teeming with great herds of cattle is the wide expanse of forest land which is scarcely fit or has not yet been taken up for cultivation, and with only patches of tillage in favoured spots, and affording herds of cattle abundant pasture and wide and unrestrained roaming ground. The tracts are stony in elevations and humous in the valleys. The forest growth being all deciduous, the pasture lands are thoroughly baked in the hot weather by the heat of the sun so peculiarly intense in the valleys in the low hilly regions. Another reason, though of secondary importance, is the noble stream of the Cauvery whose waters are utilized for irrigation higher up in Mysore, and fertilizes some of the richest tracts in Southern India lower down, and which runs in these regions through scenery of wild grandeur on a bed too deep for irrigation purposes, and affords cattle a perennial supply of water in seasons when the country becomes parched up and thirsty.

Beyond these jungle centres, but bordering on them, large herds of this breed are also kept in villages commanding extensive pasture. Cows and bulls of this breed, in small numbers, purchased from these large herds are taken away and reared in "Maidan" villages of the Kolar, Bangalore and Mysore districts. It is from these breeding-tracts that all the cattle of this kind are exported to other districts, and to foreign ports such as



Alumbadi Bullock.

Penang, Singapore, Java and Colombo. An average of nine thousand large powerful animals have been exported from Negapatam to Penang alone during the past few years. Nearly all the large cart bullocks used in Southern India are obtained from this source. The whole habitat of the breed is favourable to the development of bone. These cattle are more massive and are of larger build than those of the Mysore type found elsewhere, though they are often found wanting in their symmetry of form. A good specimen should have the following points :—

Head.—Short and stout, with thick muzzle and broad forehead.

Horns.—These are not so uniform as those which are to be found among the Amrat Mahal and allied breeds, but are more like those of the village cattle. They are much shorter and stouter than the horns of the Amrat Mahal cattle, and have, in most cases, a rather sharp turn backwards towards the upper half of their length and are very close together.

Colour.—Frequently black, and many also may be light reddish brown but the majority I have seen are white.

Eyes.—More or less prominent, black and gentle to dullness with the surrounding thick skin overhanging.

Neck.—Short and thick.

Dewlap.—Thick, broad and in folds, sometimes continuing backwards to the sheath.

Ears.—Long and generally erect.

Hump.—Large and well developed.

Legs.—Short and with plenty of bone.

Feet.—Large, with the coronary band large and the halves usually unequal and cleft wide. Consequently

the feet are rather tender, and require shoeing when the cattle are used for cart work on hard roads.

Back.—Is very seldom straight, and usually inclines from the croup to the "Cowlick" and from there gently rising to the hump.

Ribs.—Well arched and strong.

Sheath.—Deeply pendulous.

Rump.—Droops from the croup to the tail. It is usually narrower than is consistent with symmetry.

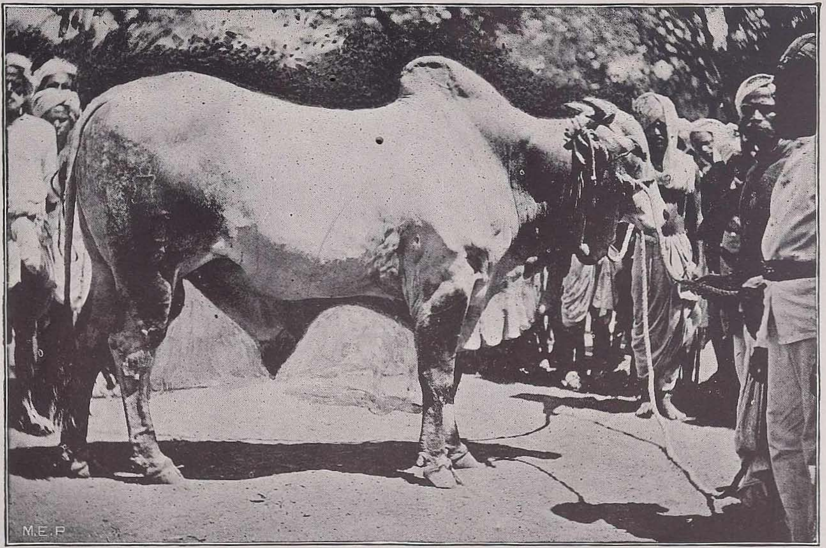
Tail.—Long and thick at the root tapering abruptly.

Skin.—Thick and loose—generally of a brown colour.

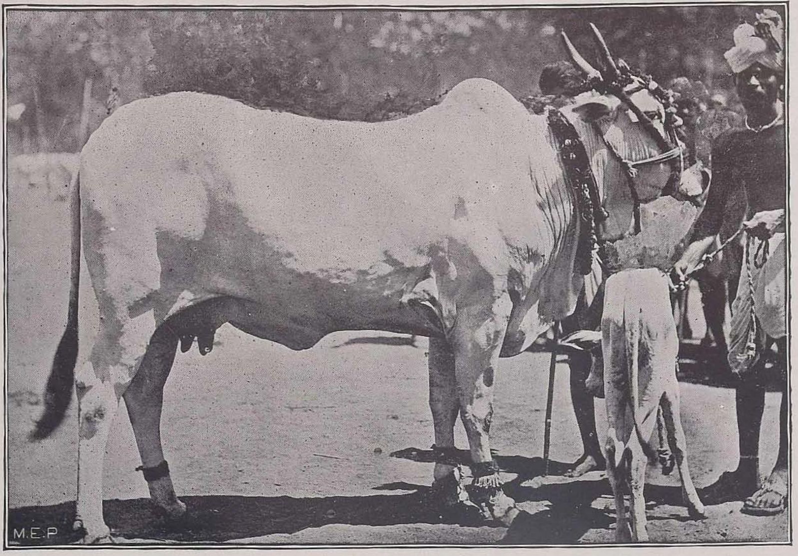
Nellore Breed.

The Nellore breed of cattle has a wide reputation throughout India, and even beyond its limits. Formerly the principal breeding localities were situated within the northern taluks of the Nellore district of the Madras Presidency, but recently these taluks have been included in the new district of Guntúr, so the cattle should not rightly be given the name of Nellore but rather that of Ongole, from which tract the best specimens of the breed are to be obtained.

It was formerly noticeable that cattle breeding received most attention in those parts of the country where circumstances of one kind or another were adverse to the extensive prosecution of agriculture. The cultivators were repeatedly deprived of the results of their labour, and were consequently considerably harassed: they, therefore, as a substitute devoted their time to raising large herds of cattle of a superior kind which were then much in demand, and which they saved from the grasp of the officials by moving them from place to place. Under more secure Government, these cattle breeders



First Prize—Brahmani Bull. Ongole Breed.



First Prize—Ongole Cow.

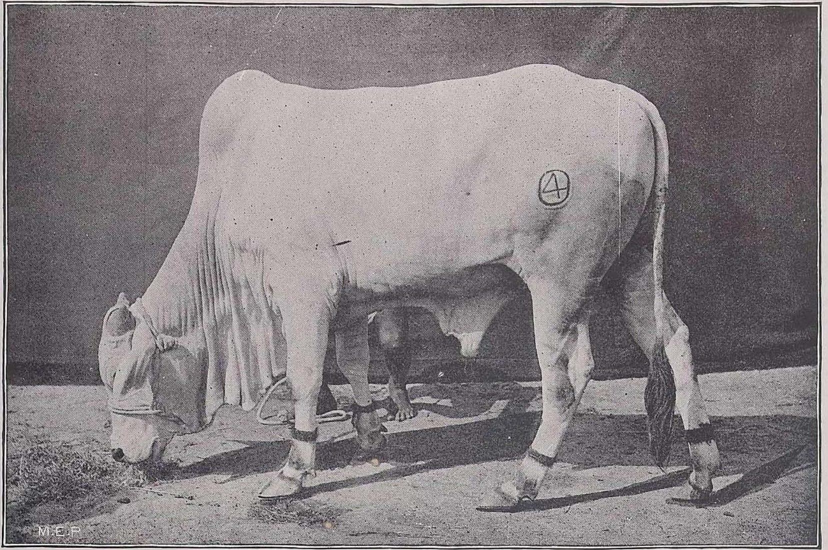
settled down, and being a fairly wealthy class retained their pride in the fine cattle in their possession, with the result that many beautiful specimens may now be seen in this part of the country. The very best examples are to be found in the villages of Karumanchi, Nidamanur, Pondur, Jayavaram, Tungutur and Karavadi in the Ongole taluk, and in Elapalapadan, Nennurpad and the hamlets along the banks of the Musi in the Kandukur taluk. Fine cattle of this breed may also be found in the taluks of Vinukonda and Narasaraopet in the Kistna district. In the southern part of the Nellore district, where wet crops are grown, the cattle are much inferior not being so well cared for or fed as in the places above named.

The system of feeding observed by the ryots of the different parts of this country naturally depends upon the extent of the pasturage. In the lowlying parts where paddy is principally grown, a certain portion of dry land is often kept as a pasturage for cattle. Most of the cattle, however, leave the villages during September and October—the southern rainy season—and are sent to the western taluks where there are extensive waste and jungle tracts. Part of the working cattle will occasionally follow the other cattle during November and December, should the pasture land of the village not be sufficient. The ryots often club together and send their cattle away in large herds. For this purpose, prior to the departure of the cattle from the village, arrangements are made for renting pasture blocks at a fixed sum for the season (October to February), or engagements are entered into with the holders of the pasture farms for the pasturing of the whole herd for the season at a small fee per head for each full grown animal. Should the north-east monsoon be favourable and extend

till late in the season, the cattle are only pastured until January when the paddy is harvested, after which there is very fair grazing. The whole of the jungle grazing is not open to the cattle at all times, for after a heavy burst of rain, invariably experienced about October, the best portion of the pasturage is preserved and kept clear of cattle for one or two months until the grass has grown up well, when the working cattle alone are turned in and kept thereon so long as the pasturage suffices, another portion being similarly kept for the other cattle. Towards the end of January when the sorghum crop on the higher land has come to ear, the young shoots termed Zadu, which are not likely to mature, are removed and given to the bullocks, which are often picketed close to the fields. Occasionally fields in the midst of cultivation are set apart for pasture, and are planted with the black and white varieties of Acacia. After being under grass for ten or twelve years, the ground is cleared of trees and broken up for cultivation. The trees shade the ground and favour the growth of grass, whilst the pods form good fodder. The pasture land held in this way is invariably distinct for each ryot, and is generally kept exclusively for working cattle, young stock, and milch cows.

The country where the best cattle are raised is undulating highland interspersed with small hills, and is mostly composed of light red or dark alluvial soil, where good sorghum, other millets and legumes are raised. The well-to-do ryots in these parts find their pleasure and pride in raising fine cattle.

There is no greater truism than that which refers to the necessity of feeding young stock, and the very great care which the best breeders bestow on the young animals, both male and female, most certainly accounts for the well-deserved reputation of the Ongole cattle. The young



Ongole Heifer—sent to Brazil.

calves are allowed to suckle the whole of the cow's milk, and when they are three months old are given grass and a small amount of mixed grains. In every way they are treated and tended as the family pets, and it is only by going into the houses of the villages that the best calves can be seen.

That there is considerable profit in the undertaking is evidenced by the high prices which the animals realize. Young bulls sell from Rs. 80 to Rs. 250. Several fine animals have been exported to South America. A good Nellore cow is worth from Rs. 80 to Rs. 150 according to the amount of milk she yields.

Ghee (clarified butter) is made in fairly large quantities, and sold to merchants for export, being seldom used by the ryots, who prefer gingelly oil for cooking, and reserve the ghee for sale. A good Nellore cow gives from 11 to 14 lb. of milk daily.

The breed is probably not so hardy as the Mysore or Alumbadi, but for slow heavy work they are unsurpassable, and they are universally employed for drawing very heavy loads in the city of Madras, frequently amounting to five tons.

The characteristics of the breed are—

Head.—Face moderately long ; muzzle fine ; forehead broad ; eyes elliptical in shape, large and mild ; skin round the eyes is black for about half an inch ; ears long and drooping ; horns short and inclined to be stumpy ; in cows the horns are longer than in bulls they are directed outwards and slightly backwards.

Neck.—Short and thick.

Hump.—Well developed.

Body.—Massive, long and deep, but some are inclined to be flat-sided. In fine specimens, the girth

behind the hump is about 84 inches, and height behind the hump 63 inches.

Back.—Of moderate length and invariably higher at the croup.

Quarters.—Strong, with a considerable droop.

Sheath.—Pendulous : cows have also a fold of skin in the position of the sheath.

Tail.—Long, fine and tapering.

Legs.—Strong, and somewhat coarse.

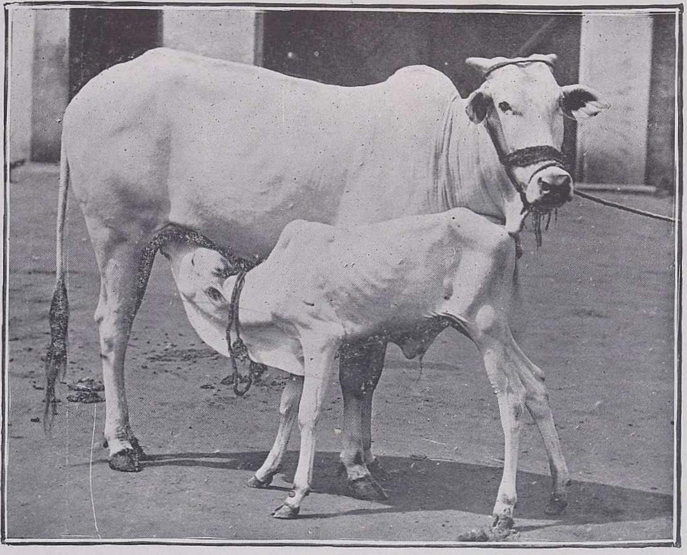
Feet.—Large and somewhat soft looking.

Colour.—Black and white and pure white, the latter is now most esteemed, but formerly black and white was the predominating colour.

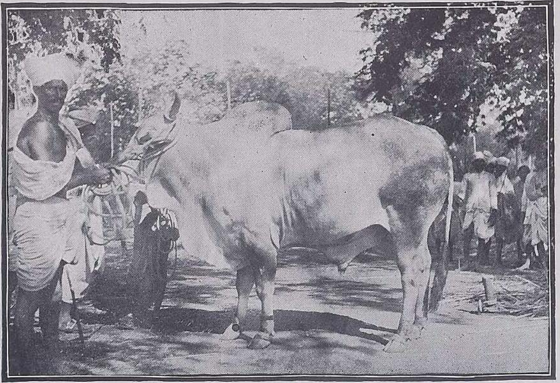
Temper.—Very docile.

The extensive pasturage obtainable in this part of the country is no doubt responsible in a great measure for the large cattle breeding industry, which Government has always been careful to foster. Previous to 1867 a poll tax used to be levied, but in that year this was abolished in Nellore, and a principle was laid down for the future that, out of the waste of each village, an area equal to 30 per cent. of the area occupied by cultivation should in future be reserved for common grazing to be equally enjoyed by all villagers free of charge ; the surplus waste, if sufficient in extent to make it worth while to adopt the system, may be leased out for one or two years at a time to the highest bidder.

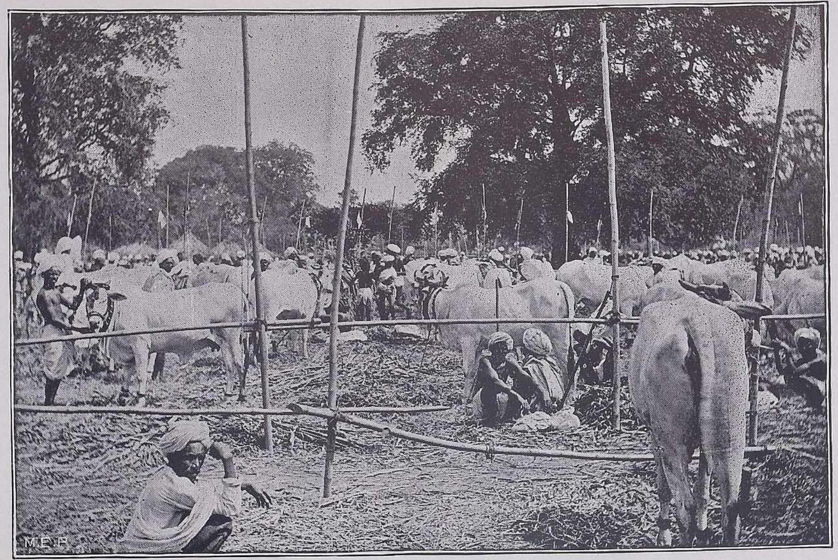
In order further to develop and encourage the breeding of good stock, an annual cattle show was established so far back as 1858, and continued uninterruptedly until 1871. During these twelve years a total of over Rs. 18,000 was distributed in prizes. The cattle show was resuscitated in 1904 with most successful results, and it is doubtful whether such a large collection of bulls and cows



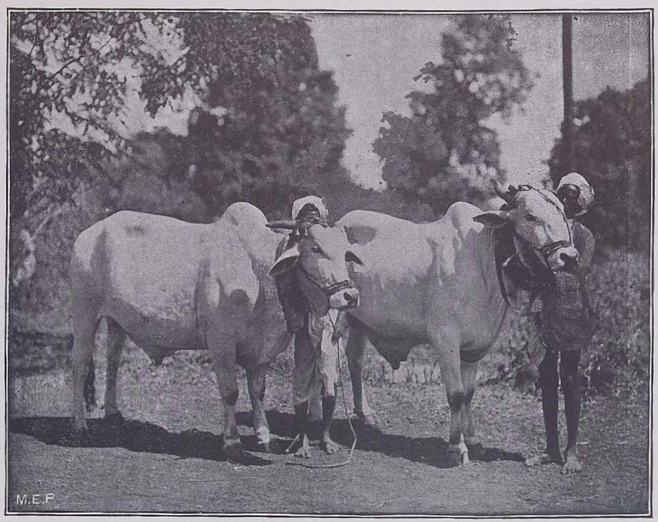
Ongole Cow and Calf.



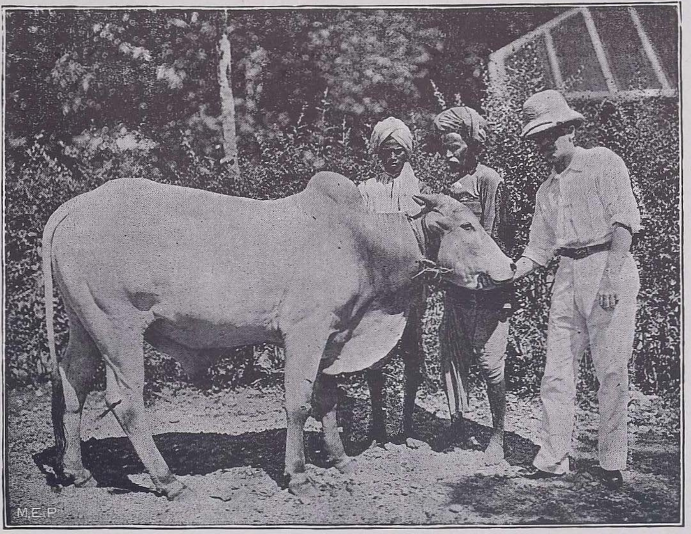
Ongole Bull.



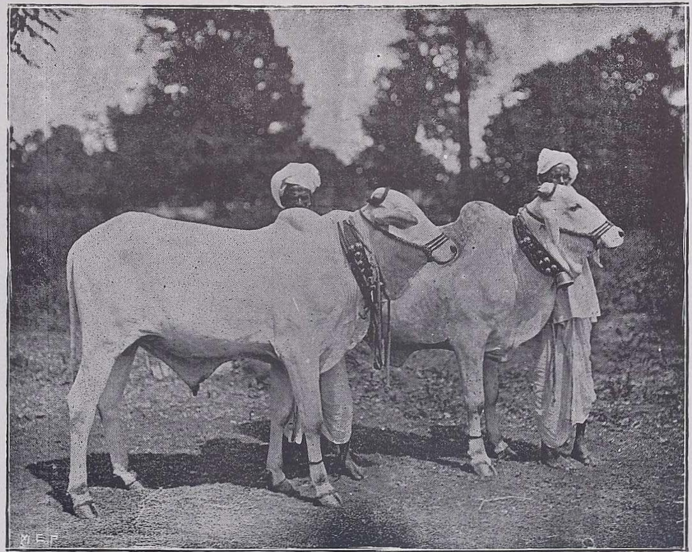
Ongole Cattle Show.



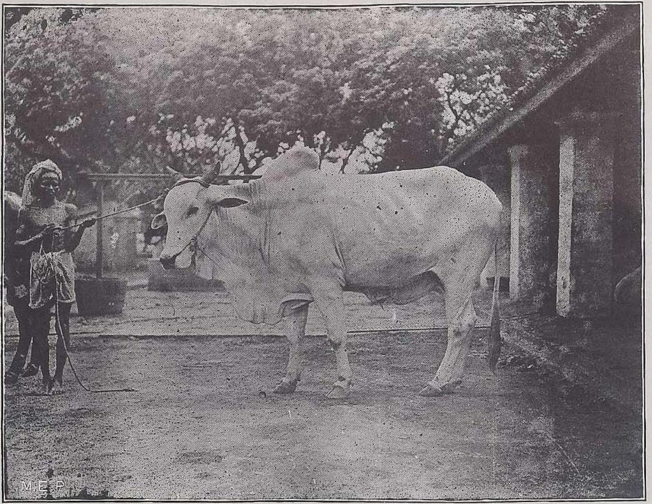
Pair of Kistna Cattle——Ongole Breed.



Vizagapatam Breed Bull Calf.



Vizagapatam bred pair of young Bulls.



Ongole Bullock.

of one breed have ever been brought together before in India. There were exhibited—

Brahmini bulls	45
Bulls	120
Bull calves	83
Bullocks, single	22
,, pairs	31
Cows	166
Heifers	132
Buffaloes, bulls	1
,, bullocks	9
,, cows	6
Rams	38
Ewes	3
Goats, he	11
,, she	3
Total ..	670

The heifers and young bulls were an exceedingly good lot, and it is most sincerely to be hoped that, with the encouragement held out by the Madras Government, the show will be held annually and equally well represented. The Cattle Show at Ongole has now become a regular institution, and has continued to grow in popularity. It would therefore be a very great pity if it were allowed to drop for want of funds and Government support, as this breed has become world renowned. During 1906 buyers came from Brazil and about 200 young stock were taken away to this distant country where the breed has become very popular.

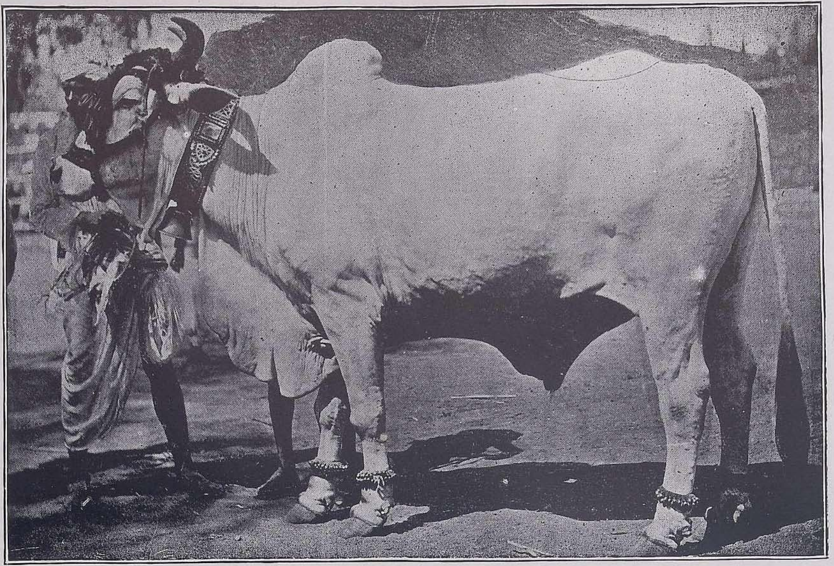
Great care is taken in the selection of the village bull, and the collection of *Brahmini* bulls brought into the show at Ongole consisted of forty-five handsome upstanding animals in splendid condition. Almost every village has one or two so-called Brahmini bulls, which

are common property, having been presented by the relations of a deceased villager as a memorial, or by some wealthy ryot, or having been purchased by public subscription. Such animals are always branded with a sacred mark.

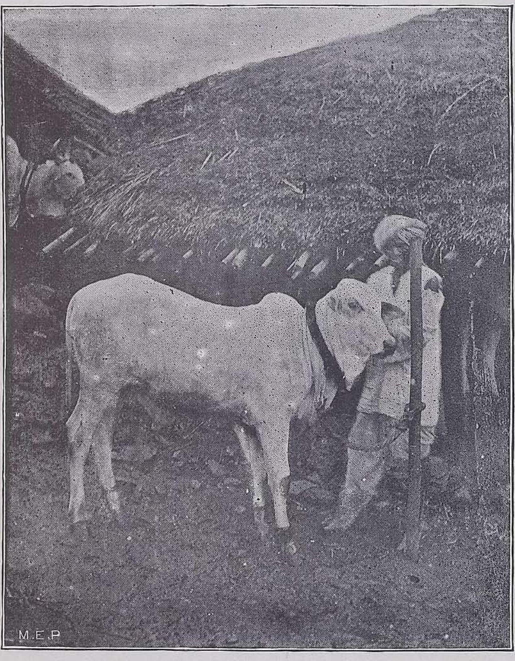
Like all agricultural classes the ryots of the east coast are very superstitious. They are usually very unwilling to exhibit a favourite cow owing to the influence of the Evil Eye (*Drishti*). A bullock whose tail has the root of the tuft of the hair situated above the hock is said to have *Eru-val* and to bring ill luck. This is not objectionable in the cow. A bullock having white hair, skin, horn and hoofs is considered of weak constitution and should not be purchased. A black bullock is generally considered to be a rogue; if not a rogue, he is considered a great value. The saying is:—"A black bullock is but the fourth of a bull, but if he is guileless he is a bullock and a quarter." A bullock with numerous small spots over the body "like a deer" is considered very lucky.

The form of the horns is supposed to indicate many things and receives as many names. For instance, "*Madakombu*" means horns bent backwards, and is considered an excellent sign in a cow. There is an old saying:—"Let any man, who does not know how to select a cow, purchase one with horns bent backwards." Straight horns are liked. Horns pointed forwards "*Kopadi*" indicate spirit. Irregular, twisted horns *churuttai* are not objected to. Those which appear hollow and have light coloured patches "*Kollikombu*" are considered to be very disastrous. Horns with white tops "*Punkombu*" are also bad. If a cow at the time of purchase voids urine, it is considered a very good omen,

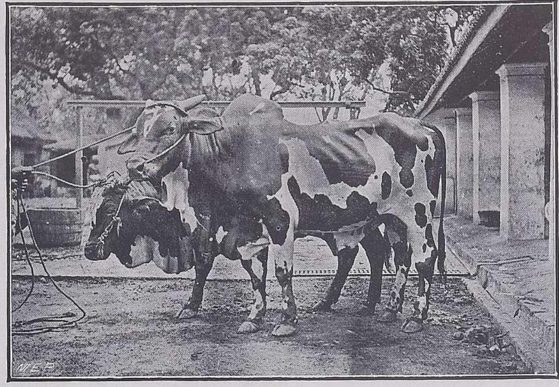
Prize Pair of Ongole Bullocks. 64 inches behind the hemp.



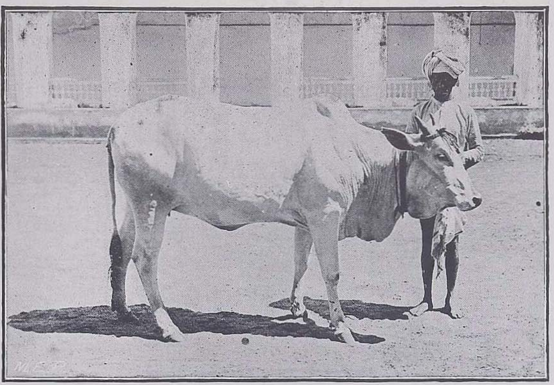
Prize Ongole Bullock.



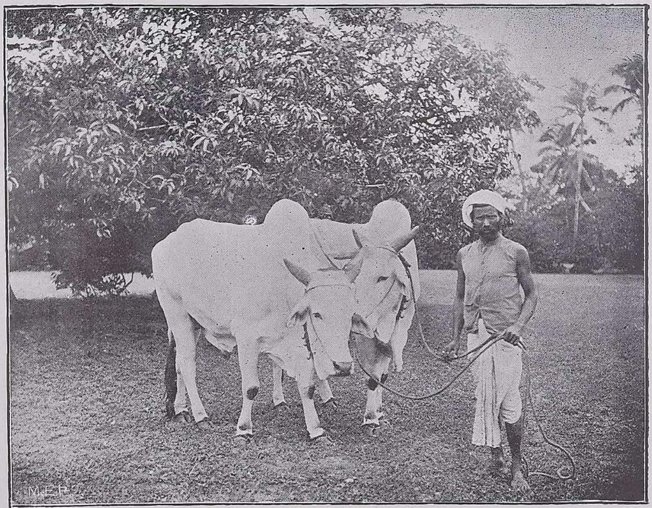
Ongole Bull Calf.



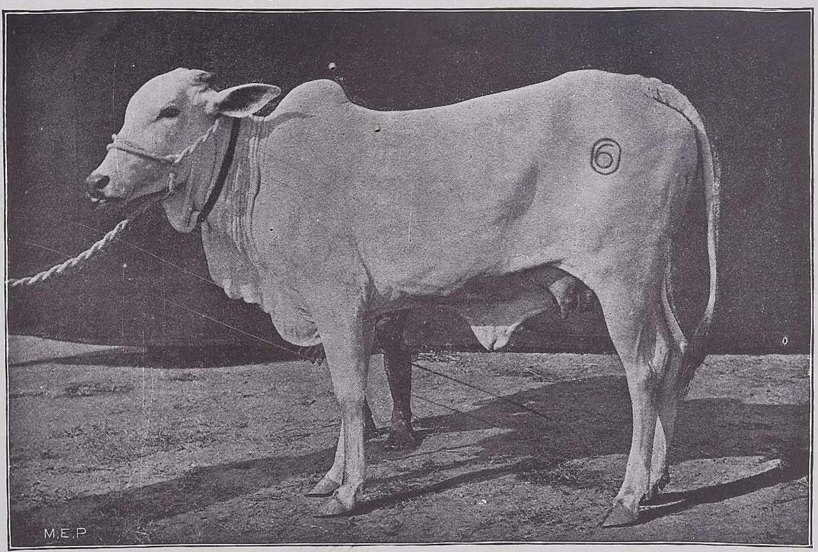
Pair of Ongole Bullocks.



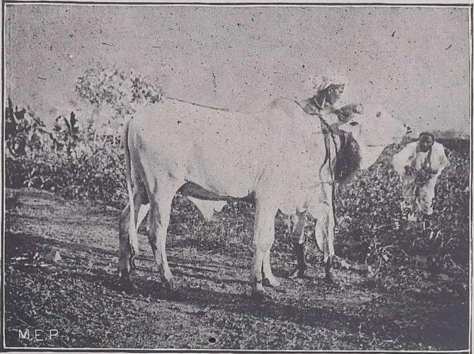
Ongole Cow.



Pair of Ongole Bullocks.



Ongole Heifer—sent to Brazil.



Young Bull at the Bobbili Cattle Show.

but if she passes dung it is a bad sign. The reverse is the case with the bullock.

A bullock, which fails to cut the fourth pair or corner incisors, is called "*Arukatti-Madu*" and is considered lucky. The saying is :—"He who purchases a bullock with only six permanent teeth (incisors) will become rich enough to purchase an elephant." A bullock which cuts only seven permanent front teeth is unlucky to its owner, and is responsible for the saying that "He who purchases such a bullock should have the preparations for his funeral made ready."

Certain observances are most scrupulously carried out by both purchaser and seller at cattle sales, and, in fact, have become unwritten law resting for authority on long consent. Disregard of these details in the procedure is seriously believed to imperil the prosperity of the owner, the seller, and the innocent animal. The following are the principal ones :—

(1) After the price has been fixed the buyer hands the seller a silver coin, either a two-anna bit or a rupee as earnest money.

(2) The balance of the money may be paid at once or at any stated time afterwards.

(3) The seller has to pay the purchaser a four-anna or eight-anna bit for what is called *Maralu labham* of Pathi Vithamalu (cotton seed). It is intended that this money should be used by the buyer for fodder for the animal for that day. The purchaser is always careful to go with four-anna pieces in the event of the seller not having change for a rupee.

(4) The buyer must never tie up the animal with his own rope, and, therefore, a purchaser never carries one.

5

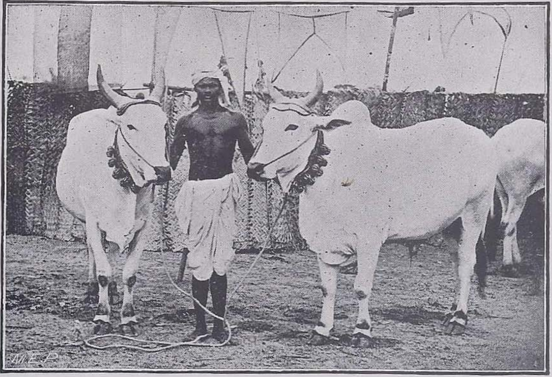
(5) The seller must always supply the purchaser with a new rope, and if it is not available, he gives the purchaser raw material which must be braided or twisted into a rope. The seller must never give the rope already used by the animal.

(6) The seller in company with the purchaser should for a short distance lead the animal himself with the fresh rope and then transfer the rope to the hands of the purchaser who then takes the animal home. This settles the sale contract and is never disputed. The conditions of sale are never reduced to writing.

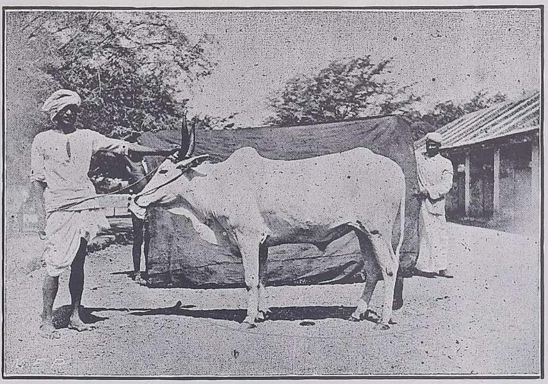
Kangayam Breed.

This breed is also known by the names *Kanganad*, *Kongu* and *Kangaen* and derives its name from the taluk of the Kangayam.

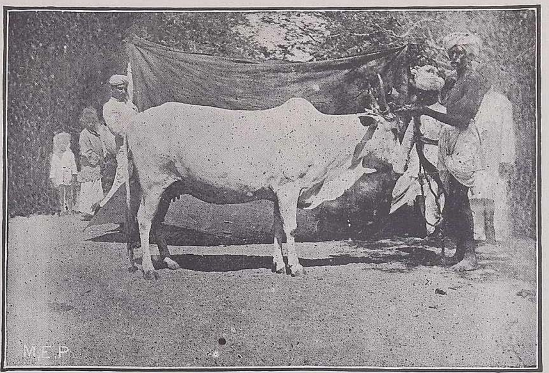
These cattle are bred in the southern and south-eastern taluks of Coimbatore. There are said to be two varieties, a large and a small. The smaller are found to be more numerous in the Kangayam, Dhárápuram, Udamalpet, Pollachi, Palladam and Erode taluks, while the larger variety are more prevalent in Karúr, Aravakurichi, and Dindigul taluks. It is understood that the celebrated Kangayam breed are not the common cattle of Kangayam, but are the property and produce of large breeders such as the Pattagar of Palaiyakottai and his family, the Kadiyar Munsiff Monigar, etc., who maintain herds of from 500 to 1,000 head, and keep large numbers of cows and bulls for breeding only. Many ryots, however, own from 10 to 20 head of cattle reared for sale. These cattle are sold, not at ordinary markets, but to dealers who come to the district for the purpose, or at large cattle fairs such as Avanashi, Mahadeshwara Hill near Kollegal, and Madura.



Kangyam Bullocks half hed. The cross is with the Ongole.



Kangyam Bullock.



Kangyan Cow.

The breed in its purest form may be seen in the herd of the Pattagar of Palaiyakottai who has been an extensive breeder for many years.

It is curious to note that the animals seen at the several cattle fairs held in what is practically the home of this breed are not nearly so good as animals of the same breed which are sold at fairs in the southern districts. There are probably two explanations for this, firstly, that it is not profitable to export any but selected animals, and secondly, purchasers select the very young male stock and these are taken away to good grazing grounds where they are specially fed up, but the fact remains that better pairs of bullocks of this breed are to be met with in the Madura and Tinnevelly districts than in the neighbourhood of Kangayam.

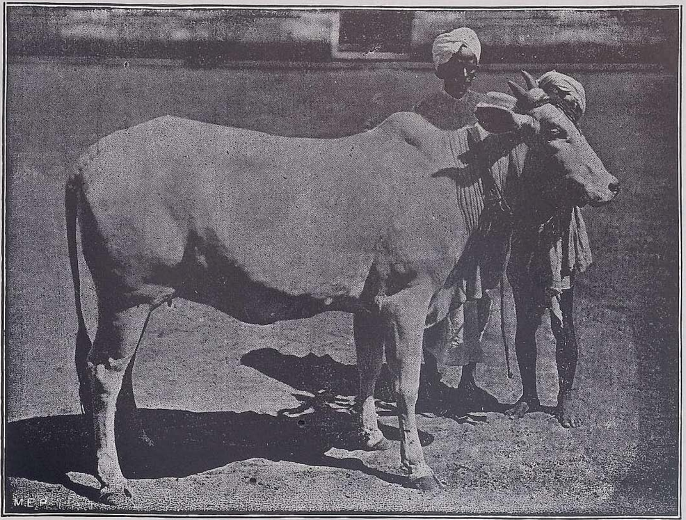
In the breeding of the ordinary cattle of the district there does not appear to be much, if any, care taken in setting apart bulls. Every ryot keeps his cows and other cattle in his own fields, which are all fenced, a practice which scarcely is to be seen beyond the limits of Coimbatore. As the young stock are often parted with at a very early age, and there is an exchange from hand to hand always going on, it is impossible to trace out the origin of the majority of the stock.

Regarding the Pattagar's cattle however this is different. His herds show a very different system of management, there is a careful selection of sires and dams, the young stock are properly reared and consequently attain a development rarely seen among cattle of the same breed met with in other parts of the district. In the first place he provides a considerable area of permanent pasture land. His land being fenced it is easy to separate the herds of different ages and sexes, the heifers run in one herd, and the young bulls in

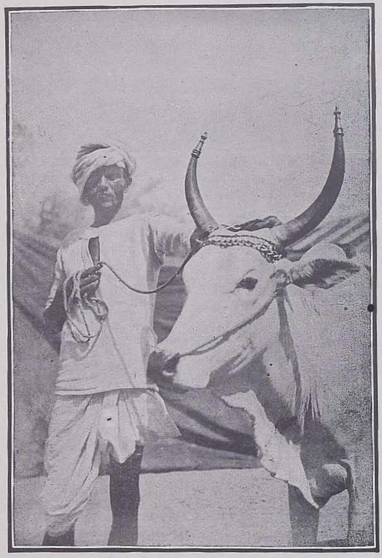
another, the cows in a third and so on. He states that he keeps the breed pure by using sires only from his own herd, though the appearance of some of the cows and heifers was such as to give the impression that they had a distinct strain of the Ongole blood in them, and as a matter of fact he possessed several pure bred Ongole cows. One herd belonging to the Pattagar consisted of about thirty-five young heifers about three years old with a bull running with them. This herd was a remarkably fine one, the heifers being in fine condition, and were a very level lot, showing great quality. The prevailing colour was white with grey markings about the hump and quarters, though there were many fawn, fawn white and even light reds. The latter are not thought so highly of as the whites or greys, although they are just as well made. The bull was a dark grey, verging to black on head, hump, and quarters with the characteristic broad face, short, thick, but pointed horns of the breed. The pasture on which the herd was grazing, although rather bare owing to the absence of rain, showed a strong sward, and was evidently well able to carry the stock on it, and which received no additional food.

Another herd consisted entirely of young bulls, all of them between one and two years old. These were a very even lot, showing however a considerable variation in colour. Another herd consisted of young bullocks which had been castrated at three years old, and were chiefly intended for sale. The Pattagar informed me that he castrated his bulls at three years old, and sold nothing but bullocks.

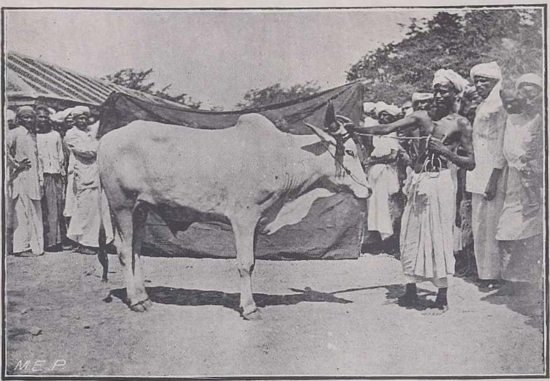
It is doubtful whether there is another landowner in India who pays so much attention, or carries out the systemic cattle breeding on such good lines as this



Kangyam Heifer.



Kangyam Bullock.



Kangyam Bullock.

Pattagar, and this only shows what can be done if due attention is paid to the essential requirements.

Both varieties of this breed are strong, active animals with compact bodies, and short stout legs. In the larger variety the horns are much longer, and of different shape to those of the small. They curve outwards and almost complete a circle at the point where they approach the tips, and for a distance of three or four inches have a sharp backward curve. The prevailing colour is pure white. The Pattagar of Palaiyakottai is the breeder of the small variety, a description of which is as follows :—

Head.—Short with broad level forehead, eyes dark and prominent, ears short and erect, horns spreading apart, straight, short and thick with sharp points.

Neck.—Short and thick.

Hump.—Moderately developed.

Dewlap.—Thin and reaching to the sternum only.

Body.—Compact and well ribbed up.

Back.—Short, broad and level.

Quarters.—Strong, slightly drooping.

Sheath.—Not pendulous.

Tail.—Short and thin.

Legs.—Short and of good bone.

Feet.—Small and hard.

Colour.—The prevailing colour is white, grey and white with grey shoulder and quarters, also red, black and broken colours are to be found. Among the ryots there is no selection of bulls, the Swami or Brahmini bull is usually the village herd sire, but there can be little doubt that cows are also served by the young uncastrated stock.

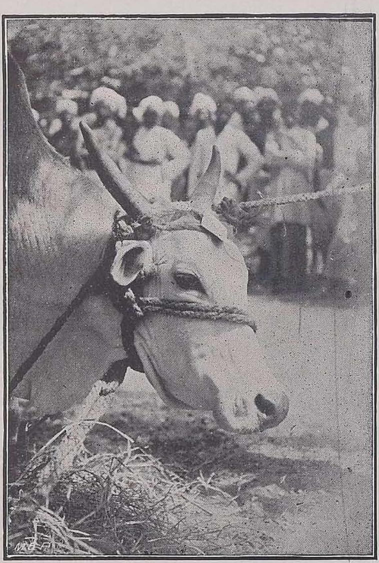
The origin of the Brahmini bull is somewhat interesting. The tradition is that one of the early Hindu

kings in the course of his travels saw what poor specimens the herd bulls were, and having given this matter much thought he decreed in honour of *Siva* and of *Nandi* the bull, who was the vehicle of the God in his peregrinations—that all well-to-do persons should, on the death of a relative, select the best young bull calf they could find, and present it as an offering to the God. These animals thus became the property of the community, and were allowed to roam and feed where they liked, and thus became the sires of the village herd.

So long as this was carried out in the spirit of the decree fine animals were produced, but gradually, although the custom is still kept up, persons bought the cheapest young bull they could find, as a salve to their conscience, and turned this loose, to eventually become the Brahmini bull. And this will probably account for some of the wretched bulls which are to be seen everywhere among the village herds.

The cows of this breed are said to be fairly good milkers, and are preferred by some people on account of their small well-set frame. The price of small bullocks varies from Rs. 40 to Rs. 70 per pair, but the larger variety command much higher prices. Cows when in full milk may be obtained for about Rs. 40.

The custom in South Coimbatore is that if the ryot possesses only a garden, he keeps his cattle within his garden with the exception of the cows which are kept at home. If the cultivator possesses dry lands he grazes his cattle during the day, and keeps them in the house compound during the night. Some keep their cattle night and day on these dry lands. There seems to be a strong objection to keep cattle on red soil if it can be helped, as it is considered to be heating. On the contrary black cotton soil is said to be cooling.



Kángyam Cow.

It is not customary to afford shelter against the sun or rain, but the cattle are protected against the furious winds which prevail in Southern Coimbatore by screens of bamboo mats and branches which are formed into a pen. These pens are moved at intervals of one or two days, and in this way the whole field becomes manured. In this way also ticks, which are a great pest to cattle, and increase where cattle are confined, are prevented from fixing on them.

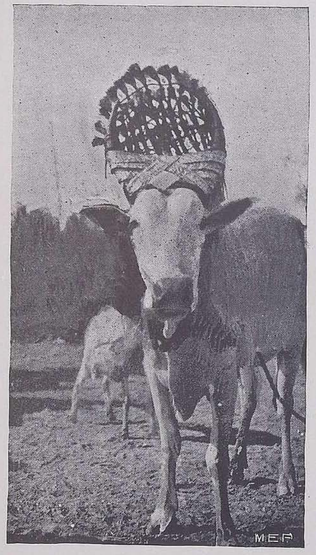
The following is the daily routine of cattle worked in gardens. At 6 A.M., the ryot gives his cattle water either with or without bran, after which they work at the plough or wells till 12 noon; they are then tied up under the shade of a tree, watered and fed. Special food consisting of bran, cotton seed, and gram which is soaked and ground is given in addition to a full ration of straw or as much as it can eat. At 2 P.M., work is resumed and continued until 6 P.M. The animals are then tied to pegs in the garden or taken to the house, and straw is given in small quantities at intervals during the night. The straw ration consists of stalks of cholum, cumbu, ragi, tenai, samai, varagu, paddy, chola chukka (top of the cholum containing ears after the removal of the grain) and collu thiri (the pods of horsegram after removal of the seeds). As a rule no special feeding is given to cows or bullocks not in work. The cattle graze on the harvested fields, and the few fields which lie fallow or on any waste land. Some few ryots in Kangayam reserve some lands for grazing on which Kolakuttai grass is grown.

Bulls are put ploughing at two and a half years of age, at three and a half they are yoked to carts, and at four and a half they are trained to work at water-lifts.

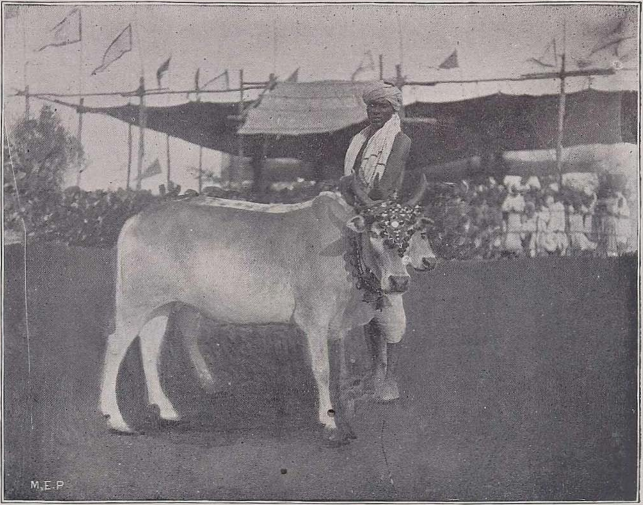
Fodder crops, grown as such, are rare, but the practice is known throughout the district and is occasionally

followed. In the Kangayam division of Dhárápuram where the best cattle are still reared, there is a regular practice in February and March of growing either cholum (*Sorghum vulgare*) or kumbu (*Penicillaria spicata*), chiefly the former under well irrigation, this is called *adar* (meaning close or crowded) *cholum* from its being sown closely so as to yield heavily, and of thinner stalk, and is grown at such time that fodder may be most needed. It is cut down before earing, and affords considerable provision during the hot weather. Fodder crops are not grown on dry lands; there is a sufficiency of pasture except in the hot weather, and as it is unusual to get rain sufficient even for ploughing during the period reckoning from the end of December to the 15th April, no such crops are possible except on garden lands. Cholum straw is a favourite fodder, and is carefully stacked for future use; the numerous stacks that dot the black cotton soil of Udamalpet and all gardens, are an agreeable feature in the landscape. Paddy (*Oryza sativa*), samai (*Panicum miliare*) and ragi (*Eleusine coracana*), straw are equally approved of, cumbu not so much. The ryot excuses himself from growing fodder by alleging, and with some reason, that as his cholum fodder is little injured by growing to maturity, he grows cholum as a grain crop rather than as a fodder crop for the double yield. The expenses of well irrigation in the hot weather are considerable, and few can afford to lose the grain of the crop. Nevertheless it is probable that a gram crop could more profitably be raised during the April-May rains rather than let it be fed off by stock or ploughed in as green manure.

Young bulls are emasculated at the age of about two and a half years by the process of crushing which is universal in India. They are at that age allowed to



Jellicut Bull.



Pulikolum Breed—Jellicut Bull.

cover cows, and heifers are put to the bull when their first pair of permanent incisors have appeared.

PULIKOLUM OR JELLICUT BREED.

Other names have been given to this breed and they are sometimes known as Kilakad or Kilkattu. This is a very numerous breed, and although a fair number are bred in the various villages in the Madura district by far the largest breeding operations are conducted in the south and south-west of Madura; large numbers are also raised in the vicinity of the Cumbum valley and the Perraya river where there are grazing grounds of vast extent. There is a big breeder living near Madura at Cholavandanniya, by the name Iyengottai Mamzakkarar, who owns about 1,000 head of cattle, and who exhibited some at the Madura Cattle Show held in 1907. The young bulls which he stated to be typical of the breed were rather small, but otherwise there was little fault to be found with them. They were very compact, with stout legs and hard feet. The loins, shoulders, and neck very powerful, and both were capable of doing very good work. He wanted Rs. 100 each for these bulls, but this class of cattle may usually be purchased for about Rs. 35 to Rs. 50 each. These cattle, as a rule, are comparatively small in size, but are very active and capable of much endurance. In many of the villages in South Madura certain of the small bulls are kept for the purpose of bull fighting or rather bull baiting, and are known as *Jellicut* which means an ornament of leaves, from the fact that the horns of the bull are usually decorated with a vividly coloured cloth. The method of baiting is as follows. A coloured cloth is firmly tied round the horns of a bull, and he is then set free. A number of men then attack it and endeavour to untie the

cloth which the bull, having now become extremely excited, resents. It naturally shows fight, and has generally to be thrown down, and both hind legs held before the cloth can be untied. It is no uncommon occurrence for men to be injured, and even killed, but nevertheless the sport is most popular. Bulls selected for this purpose are fed and well cared for. They are kept apart and fed by the owner only, so as to make them savage towards strangers. To show how popular is this sport I may say that hundreds of these bulls are kept for this sole purpose.

In many points they resemble the smaller sized variety of the Konga or Kangayams, but they are finer bred, and give the idea that they have in them a strain of the Mysore blood, and this is highly probable. The larger ones are extensively used for coach work, and they are capable of trotting continuously 5 or 6 miles an hour. The cows are poor milkers.

Description.

Head.—Face of moderate length, muzzle fine, forehead fairly broad, horns wide-spread and curved inwards having sharp points, ears short and erect, and eyes quick and prominent.

Neck.—Short and stout.

Hump.—Well developed.

Dewlap.—Narrow, thin, and extending to the chest only.

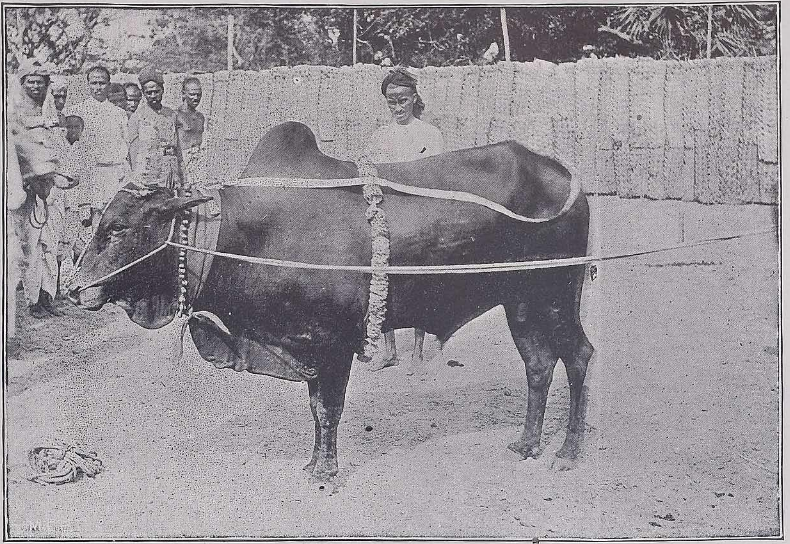
Body.—Compact, and well ribbed up.

Back.—Broad, short, and slightly higher at croup.

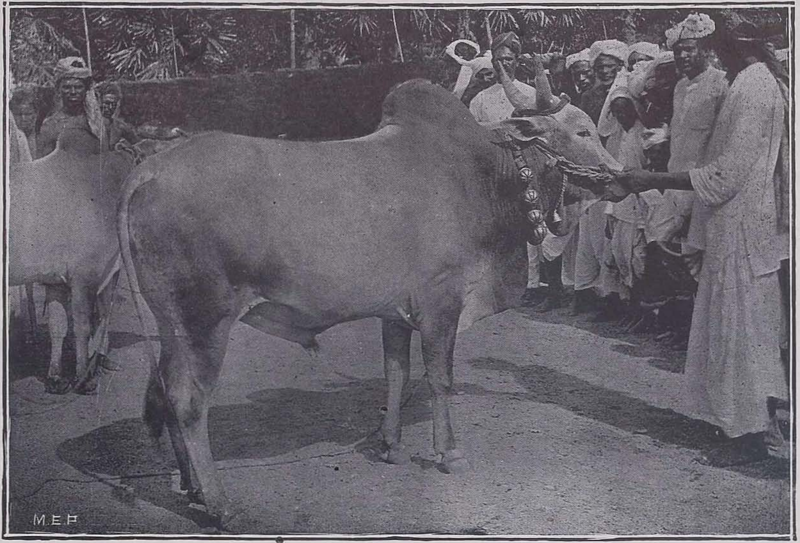
Quarters.—Strong and level.

Sheath.—Adherent to the body.

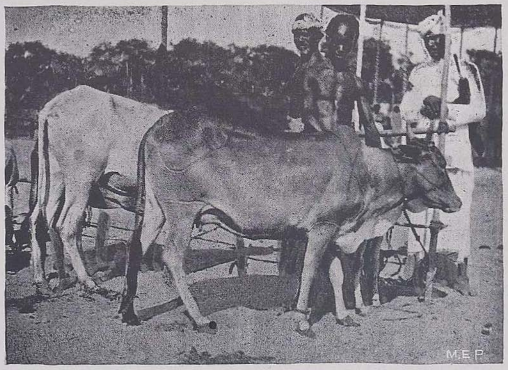
Tail.—Long, with large tuft of hairs.



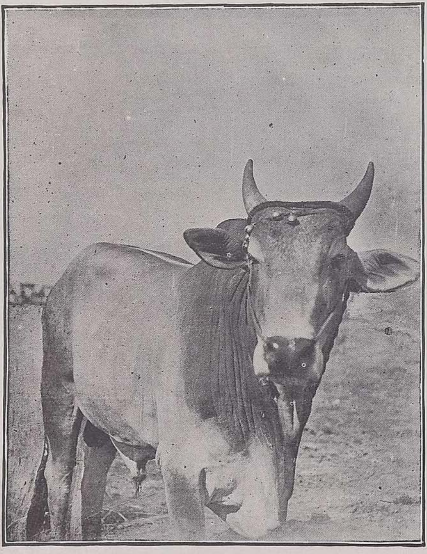
Jellicut Bull--Madura.



Pulikolum Bull.



Jellicut Cows.



Pulikolum Bull.

Legs.—Strong, short, and well set apart, usually grey and white, but other colours prevail.

KAPPILIYAN BREED.

A tribe of people called the Kappiliyans of Cumbum in the Madura district have a herd, not very numerous of a somewhat distinctive breed. This tribe are of Canarese origin, and still speak that language. Mr. Francis in the Gazetteer of Madura gives a most interesting account. In describing them he says they are small, active, round barrelled animals well known for their trotting powers, which the people themselves declare to be descendants of some cattle they brought with them when they first came to these parts. They are called the *Devaru Avu* in Canarese or in Tamil the *Tambiran Madu*, both of which phrases mean "the sacred herd."

The cows are never milked, and are only used for breeding. Members of the herd which die are buried, and are not, as elsewhere, allowed to be desecrated by the chuckler's skinning knife.

The leader of the herd is called "the King Bull" *Palladu Avu*, and when he dies a successor is selected in a quaint manner, with elaborate and expensive ceremonial. On the auspicious day fixed for the election, the whole herd is assembled, and camphor, plantain, betel and nut, and so forth are solemnly offered to it. A bundle of sugarcane is then placed before it, and the attendant Kappiliyans watch eagerly to see which of the bulls of the herd will approach and eat this. The animal which first does so is acclaimed as the New "King Bull" and is formally installed in his office by being daubed with saffron and kunkuman and garlanded with flowers. Thereafter he is treated by the whole caste as a God, is given the holy name of *Nandagopalaswami*, and is allotted to

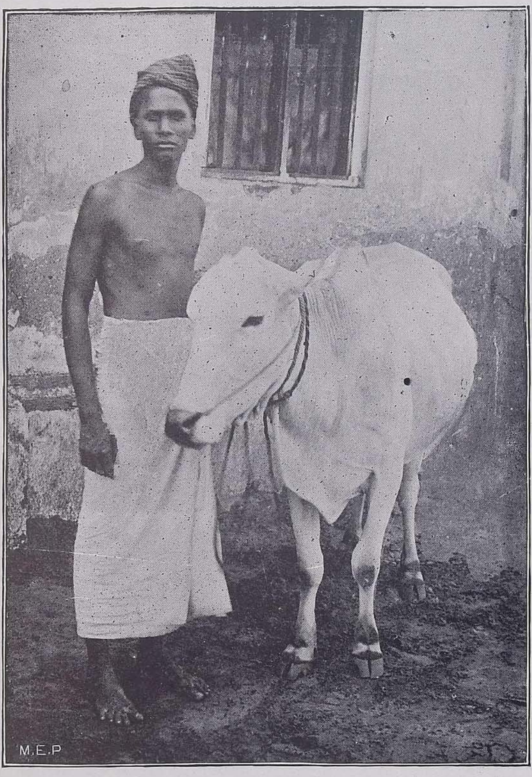
watch over and worship him a special attendant, who enjoys the inams which stand in his name, and is the custodian of the jewels and the copper grants which were presented in days gone by to his predecessors. There are now nine of these grants, but they do not state the Sakka year in which they were drawn out, and the names of the Rulers are not identifiable.

The "King Bulls" are credited with having performed many miracles, many of which stories are still eagerly related, and their opinion is still solicited on matters of importance. The herd is not taken to the hills for the hot weather until its King has signified his approval by accepting some sugar and milk placed near him. His attendant always belongs to a particular subdivision of the caste, and when he dies his successor is selected in as haphazard a fashion as the King Bull himself. Before the assembled Kappiliyans puja is offered to the sacred bull, and then a young boy is seized by divine inspiration and points out the man who is to be the new holder of the office.

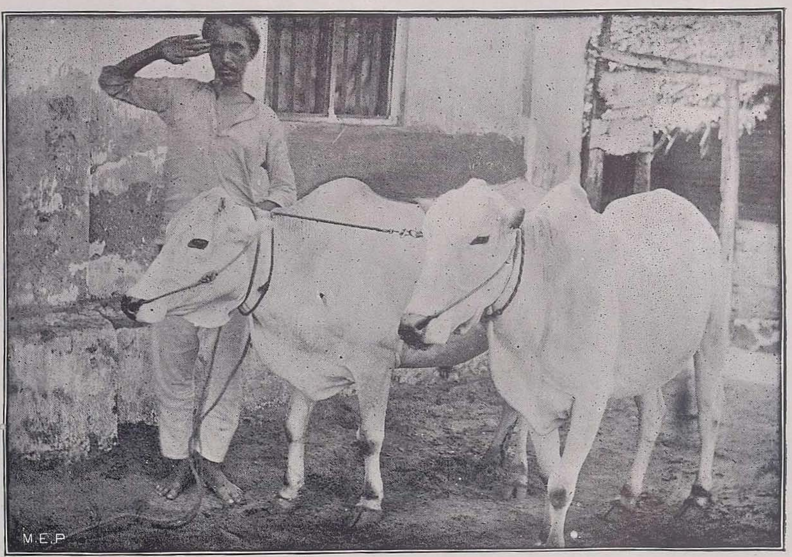
The herd receives recruits from outside owing to the Hindus round about dedicating to it all calves which are born on the first day of Thai, but these are not treated as being quite of the elect. The Kappiliyans have recently raised Rs. 11,000 by taxing all members of their caste in the Periyakulam taluk for three years, and have spent this sum in building roomy masonry quarters at Cumbum for the sacred breed. Their chief grievance is that the same grazing fees are levied on their animals as on mere ordinary cattle which, they urge, is equivalent to treating Gods as equals of men.

Tanjore Polled Cattle.

At first sight these animals would appear to be of a distinct breed, and quite different from any animals found



Tanjore Bullock.



A pair of Tanjore horned cattle.

in the Presidency, but this is due to the early destruction of their horns, giving the head an appearance of that of the British polled cattle. In this district it is the custom to purchase cattle from the cattle dealers who bring them chiefly from Salem and Coimbatore, but many are brought from the breeding grounds in the Cumbum valley in the Madura district. The offspring which are calved in the Tanjore homesteads are, at about the age of six months, dehorned by their owners. The procedure is to take some hairs from the tail, and this is mixed with jaggery or coarse sugar, and the mixture is applied over the young horns; then a heated iron is drawn backwards and forwards until the part is sufficiently burnt. The burnt part takes two or three weeks to heal, and prevents the growth of the horns. It is also customary to cut two or three inches off the ears, as this is supposed to improve the appearance of the animal. The destruction of the horns is supposed to increase its strength and render it more docile, and, to a certain extent, it has this effect. This process alters the appearance of the cattle, and most certainly give the impression that it is a special breed. It is only in certain parts of Tanjore that it would be possible to breed cattle, as nearly the whole of it consists of delta land. Except in the appearance of the head these animals present all the chief characteristics of the Kangayam breed.

Description.

Head.—Short, forehead broad, eyes, bright and prominent, horns absent, and ears shortened.

Neck.—Short and thick.

Hump.—Moderately developed.

Dewlap.—Thin, and reaching to the sternum only.

Body.—Compact.

Back.—Slightly rising towards the croup.

Quarters.—Strong and drooping.

Sheath.—Adherent to the body.

Tail.—Rather long, and with a large tuft, sometimes nearly reaching to the ground.

Legs.—Short and strong.

Feet.—Good, being small and hard.

Colour.—White or light grey prevails.

Height.—From 44 to 48 inches behind the hump.

Goomsur Breed.

This is a very small variety of animal found to the north of the Ganjám district. They are very symmetrical in shape and active, and are largely used for cart work in the district. All over the taluk of Goomsur there is extensive grazing ground which is very suitable for rearing of cattle but they never attain any size. In 1908 a cattle show was inaugurated at Berhampur, the chief town of the district, and handsome prizes were offered for the best cattle, but it being the first show ever held in the district it was unfamiliar to the people. It is, however, anticipated that in time it will become a valuable institution, as on the first occasion it was very well attended. The following is a description of a typical Goomsur bullock:—

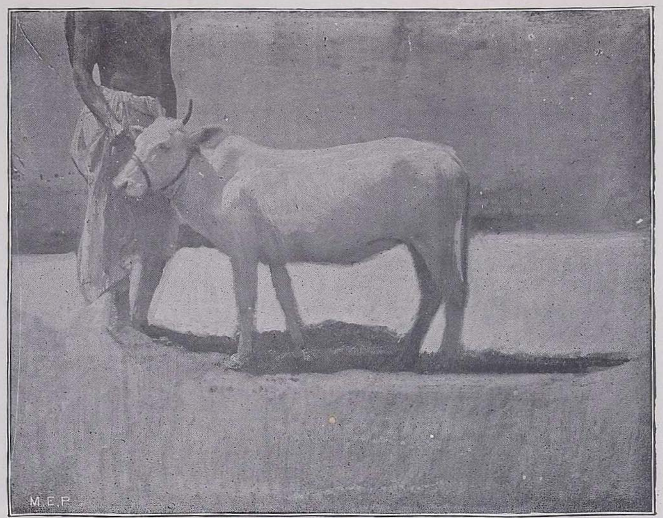
Head.—Small, with a flat face, broad forehead, and mild but intelligent eyes. The horns are medium sized curving outwards and inwards.

Body.—Square, compact, and well ribbed up, with good strong loins. The hump is fairly well developed.

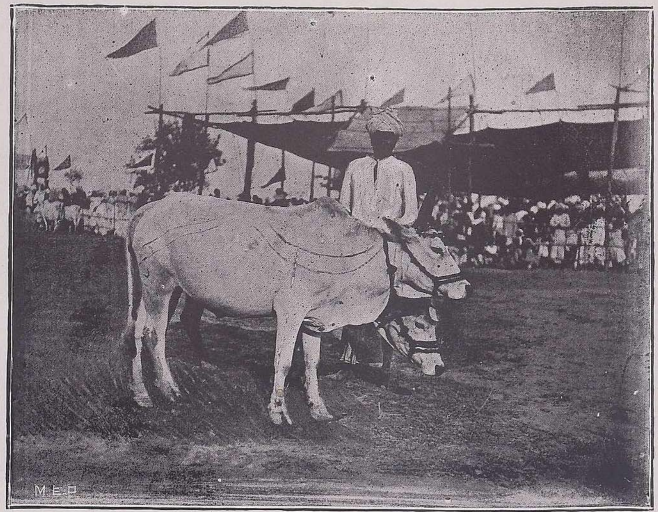
Dewlap.—Thin, and reaching to the sternum only.

Sheath.—Adherent to the body.

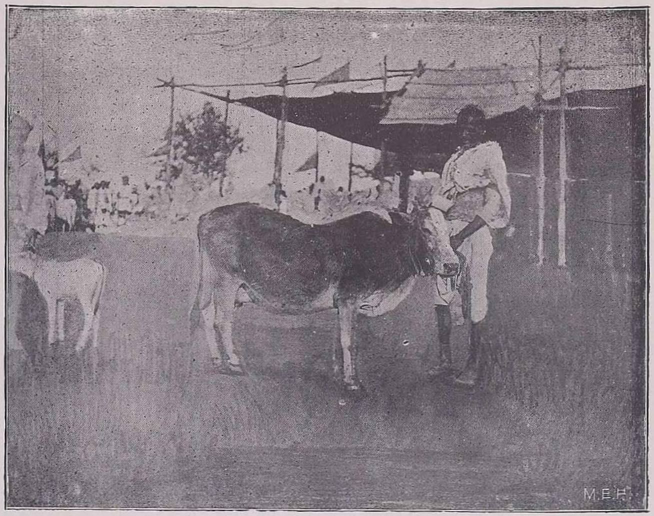
Tail.—Reaching to the hocks, fine and "whippy" with a large tuft of hair at the end.



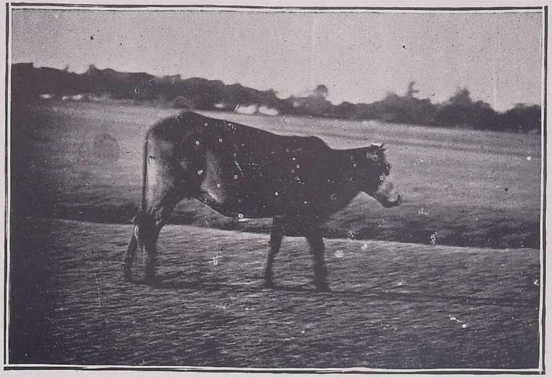
Gumsoor Cow.



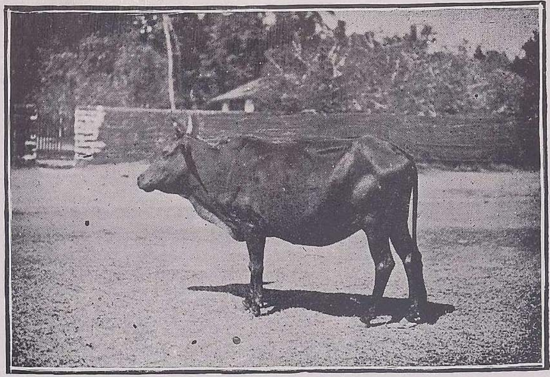
Pair of Gumsoor Cattle.



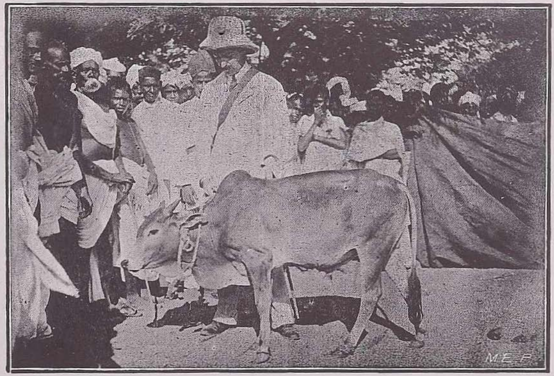
Gumsoor Cow.



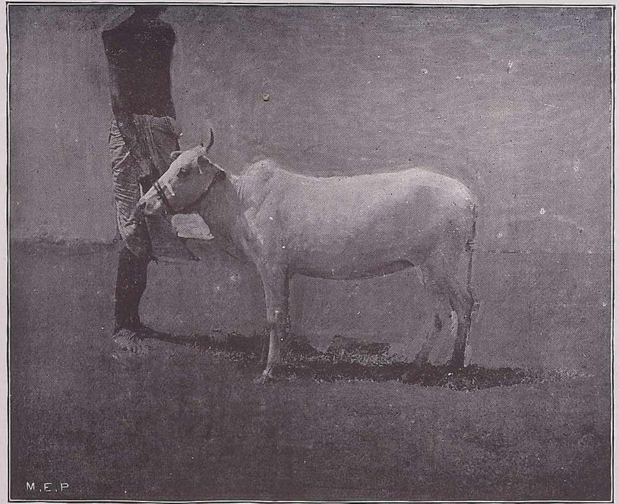
Malabar Cow.



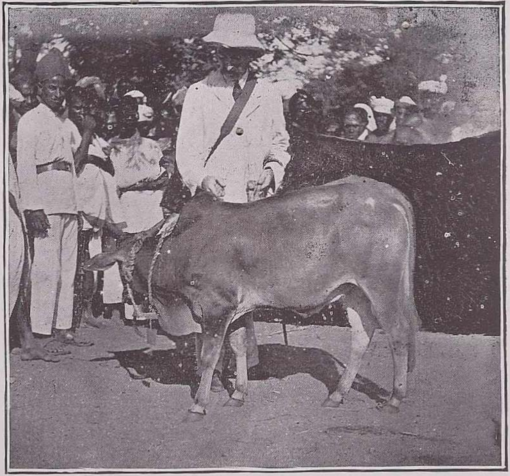
West Coast (Malabar) Cow.



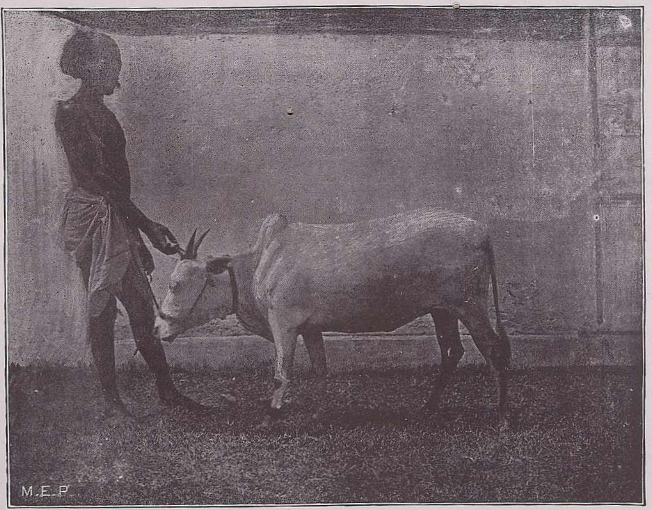
Diminutive Bull—4 years old.



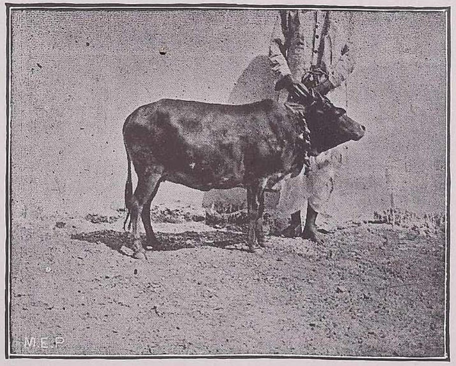
Diminutive Breed—Cow.



Diminitive bull.



Diminutive Cow.



Diminutive Cow.

Feet.—Good, hard, and sound.

Colour.—Usually light grey, but other colours also prevail.

Height.—From 42 to 46 inches measured behind the hump.

LUCKY MARKS.

(1) *Támani Suli.*—A ridge of hair along the middle line of the animals' back, about the centre. "Támani" means a herd, and this mark indicates that the purchaser will acquire a large number of cattle.

(2) *Irattai-kavam* consists of two ridges of hair, one on each side of the brisket. A single hair mark on one side of the brisket (*Ottai-kavam*) is most unlucky, and forebodes the loss of all other cattle in the house, and also the death of the purchaser.

(3) *Bháshikam Suli* is a crown on the forehead above the line of the eyes. "*Bháshikam*" is the name of the wreath worn by bride and bridegroom during the marriage ceremony. If the purchaser be a bachelor or widower, this mark indicates that he will marry soon. If the purchaser be a married man, he will either have the misfortune to lose his wife and marry again, or the good fortune to obtain two wives.

(4) *Gopura Suli.*—A crown upon, in front of, or immediately behind, the hump. This is considered to be a very lucky mark.

(5) *Nir Suli* is a crown situated on the middle line of the belly just opposite to the opening of the urethra. Regarding this the saying is that "the family will either be reduced to ashes, or swell like a river." The hair-mark is thus of doubtful signification. An intending purchaser, rather than incur the risk of evil consequences, will avoid the purchase. The ryots say that if a little

earth be taken and rubbed on this hair-mark the bullock will void urine.

(6) *Eurupuran* (ascending centipede).—A ridge of hair on the hind quarters curving up to the back is a sign of coming prosperity. If the ridge does not curve upwards to the back it is called *Irangupúrán*, (descending centipede) and indicates adversity to the purchaser.

(7) *Lakshimi Suli* is a hair-mark situated on one side of the neck at some distance from the dewlap. "*Lakshumi*" is the goddess of fortune. This is considered to be the most lucky hair-mark, but is rarely met with. A bullock with such a mark is highly esteemed, and fetches a long price.

Unlucky Marks.

(1) *Mukkanti Suli* or *Agni Suli*.—Three crowns on the forehead arranged in form of a triangle said to represent the three eyes of Siva of which the one in the forehead will, if opened, burn up all things within the range of vision.

This mark forebodes ruin to the purchaser.

(2) *Kudai-mel-kudai*.—Two crowns one over the other on the forehead predict disaster after disaster.

(3) *Ottai-kävam*.—A single hair-mark on one side o the brisket close to the middle line forebodes loss of all other cattle in the house, and the death of the purchaser.

(4) *Vilangu Suli* (fetters).—Hair-marks on the fetlocks of either pair of legs indicate that the purchaser will soon be in gaol.

(5) *Padai Suli*.—Two ridges of hair on the back on either side of the middle line indicate that the purchaser will soon need a coffin.

(6) *Irangupúrán* (descending centipede).—A ridge of hair on the hind quarters not curving upwards to the back indicates adversity.

(7) *Nagappadam.*—A ridge of hair on the haunch spreading out at one end like the hood of a cobra. If the direction of the hood is upwards it is termed *Munnágam*, and if downwards, *Pinnágam*.

(8) *Tattu Suli* (obstacle).—A crown situated on the back between the points of the hips indicates that any business undertaken by the purchaser will fail.

(9) *Tudaippa Suli.*—A hair-mark on the side of the tail near the root, sometimes extending as ridge over the back.

BUFFALOES.

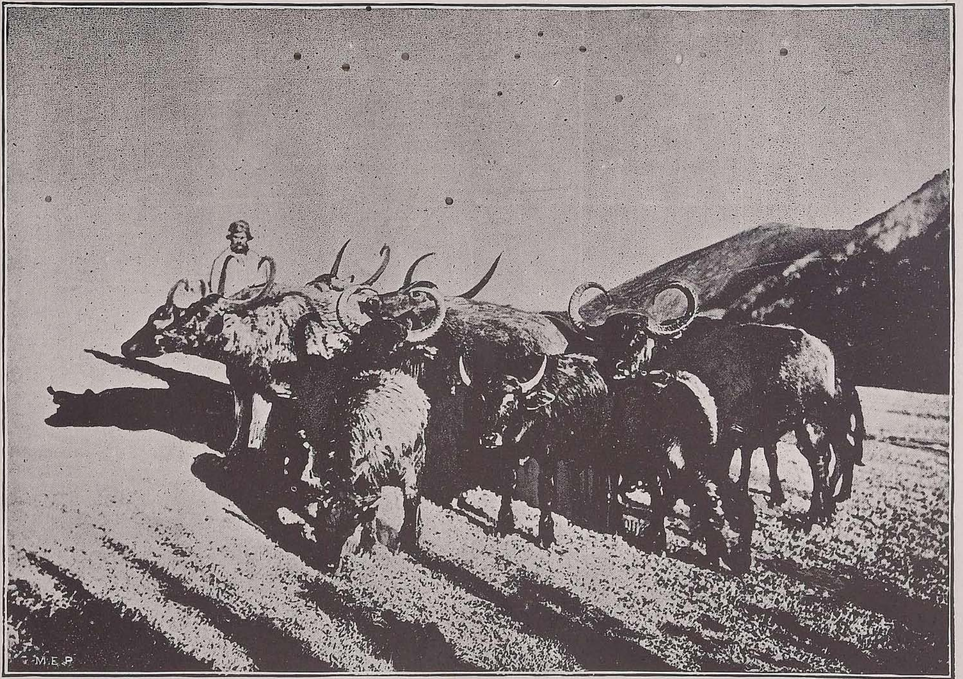
The buffalo or *Bos babulus* stands next to the ox in its utility to man, and still exists in a wild state in large numbers. There is scarcely an animal upon which domesticity has made so little impression as the buffalo, and yet it is universal, and found all over the Presidency, distinguished by its large flat horns, some curved and some long, measuring sometimes as much as five and six feet in length. The colour varies from a black to a light slate colour, with very scanty hair, but with tufts of hair in various parts of the body.

These animals are very largely used where wet cultivation is in vogue. Although slow they are excellent workers, particularly in the ploughing of paddy fields and sugar mills.

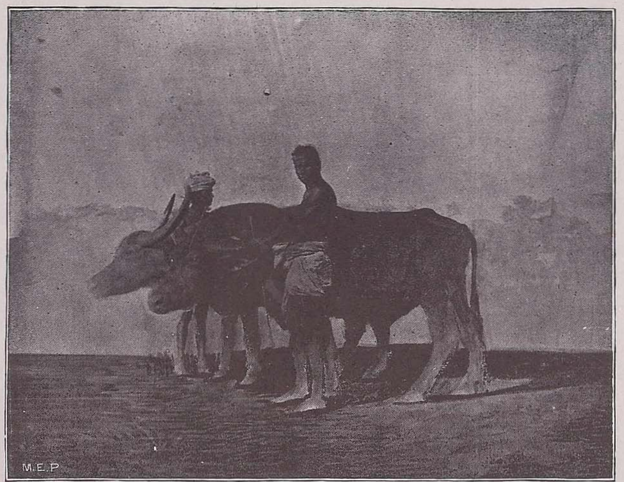
In Southern India there are probably four distinct varieties, *viz.* :—The Toda which are found on the plateau of the Nilgiri hills. The Parlákimedi on the Ganjám hills on the East Coast. Malabar, the best of which are to be found in the south-western portion of that district and South Canara, and the small non-descript variety which may be seen everywhere.

Toda Buffalo.

The Toda buffalo is pretty well known to the frequenters of the Nilgiri hills where each Toda Mund possesses a herd. They differ from the kind generally met with on the plains, and appear to be indigenous to those hills alone. They are of exceedingly powerful build and long in carcase, they have scarcely any hump ; the chest is broad and deep ; the legs short and sturdy ; the head large and heavy, and surmounted by horns set wide apart and curved differently to those of the animals seen



Toda Buffaloes.



Toda Buffaloes.

on the plains, the points being recurved inwards, outwards, and forwards. They carry their heads low, and from this peculiar curvature of the horns it gives them at first sight a bull dog appearance. Along the crest of the neck, hump and back, there is a thick growth of hair like a mane which imparts a bison-like appearance to them. They are known to be fierce and rather dangerous to approach incautiously. At the sight of a stranger they throw up their heads, run back for some distance, when they abruptly halt, and turn towards the object of these fears, at whom they fiercely stare with heads erect, cautiously advance, and retire, then gather together in a compact mass prepared for attack.

At other times the whole herd starts suddenly into an impetuous rush with their heads down, and overrun, gore or trample to death the object that has excited their anger. In this manner tigers and other beasts of prey are often kept at bay, or killed by the simultaneous rush of the herd.

They are good milkers, yielding daily from five to nine quarts of very rich milk. The milk has an unusually well flavoured taste. Beyond this they are put to no other use whatever.

The cows are milked both at night and in the morning, but the principal dairying operation is conducted before sunrise. The "tuel" or pen is a circular enclosure varying in size according to the numbers comprising the herd, built of loose stone with a single entrance guarded by powerful wooden stakes in which the herds are shut in for the night. It is generally located in some sheltered spot, and embanked to the height of three or four feet. During the heavy rains the windward side of the pen is bushed with brushwood to protect the herd from the cold

and piercing winds. These pens have no covering whatsoever, the cattle are exposed at all seasons to the rains and sun, while the floor is covered with an accumulation of their own droppings. The young calves however, prior to their being weaned, are very carefully looked after, and kept under shelter at all times. During the day the calves either accompany their mothers or are grazed separately in charge of an attendant. The Toda buffalo enters very largely into the ceremonials of this peculiar people who interest all visitors to the Nilgiris. The Todas have no history, no written character, and only a very elementary language. They are supposed to have lived on this plateau for upwards of 800 years, and their only means of livelihood is the keeping of herds of buffaloes. Before the advent of the British Government they were considered to be "lords of the soil," but when the encroachment of the town of Ootacamund began to envelope the grazing lands of these people, the question of the title was fully gone into, and now the Toda have become tenants of the over-lord. Under the recent survey it was arranged that about fifty acres of land, ordinarily to a considerable extent woodland, should be demarcated as the site or reserve of each Mund or homestead, the total being about seventy. On this the Todas pay an assessment of two annas per acre, the lowest under the present assessment, and this is the only tax they pay.

Soon after the birth of a child a young buffalo calf is brought into the presence of the family. The father takes three measures and pours water from the third measure into the other two holding them close to the hind quarters of the calf on the right side. The meaning of this singular rite is not clear, but it probably has reference to the future supply of milk for the infants' sustenance.

Early betrothals are common among Todas, and an interchange of buffaloes ratifies the agreement ; later on when the marriage is consummated, another exchange of buffaloes takes place. At the funeral a small herd of buffoloes is driven along with the *Cortége*, and all the friends of the deceased and neighbouring villagers to do honour to the dead. Arrived at the place of burning each buffalo has a little bell hung round its neck, and they are then driven close to the pile with the words "*Aran od utu*," "Go with him." Then all the mourners take handfuls of earth and throw them at the buffaloes, and afterwards ask the corpse whether they may kill buffaloes for it.

There is an annual ceremonial in commemoration of all those who have died during the year. During the first day the animals intended for sacrifice are driven in where they are safely enclosed in a kraal, two or three for each of the dead to be commemorated. The young men now throw off their blankets and rush among them, hanging on to the animals by their horns and neck, whilst a bell is hung on to the neck of each. On the second day the bier is brought out, a hole is dug at the entrance of the kraal, and the priest "does puja." After this the "pujari" approaches with garlands of creepers which he throws at the buffaloes. This is the signal for the "*Coup de grace*." The poor terrified creatures who have been half maddened by the treatment which they have already undergone from the young men who have spent the preceding horns in exciting them in every way, rush madly about, and sometimes leap the kraal wall, and make their escape to some distance before they can be caught and despatched. The bodies are dragged back and placed in a line with the bier beside them, and mourned.

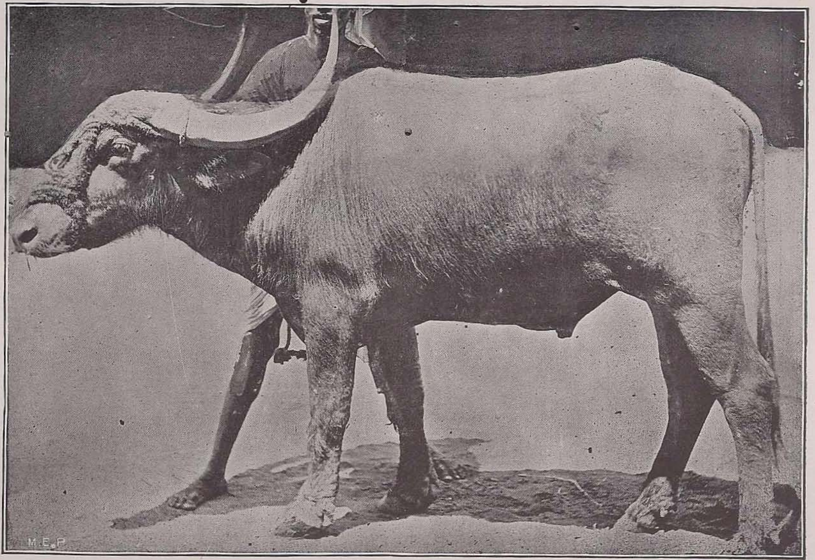
What follows next is weird and cruel, and the Todas evidently fear that Government may prohibit it on the

score of cruelty, for they "make a secret" of this part of the proceedings. A buffalo, cow and calf are produced, the latter is held by three men while the former receives a blow between the horns which stuns without killing her. A gash is then made under the foreleg of the poor animal, and the *Varzhal* or inferior priest, dipping some pieces of bark into the wound, gives some of the blood to the kinsmen, who smear it upon the "bier" saying at the time, "May the sin run away."

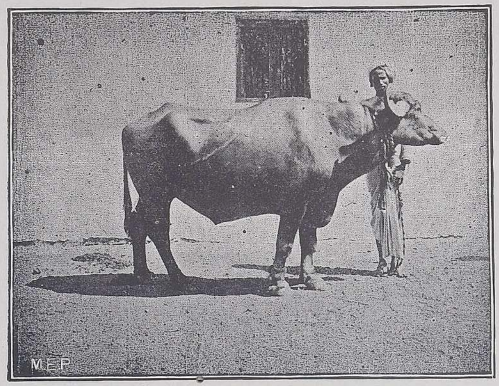
Formerly there used to be reckless slaughter, but Government has stepped in and stopped it on the ground of the cruelties practised. None were gainers by the deaths of these poor animals except the *Kotas* who attend on these occasions as musicians, and they claim the carcasses of all the buffaloes. When the Todas are asked why they give the Kotas all the carcasses, they exclaim "when the buffaloes are alive they are ours, when they are dead they are the Kotas."

BUFFALOES—SOUTH CANARA.

There is a sect of Hindus known as the Jain Bants who own a fine hardy breed of buffaloes, and some of the best may be seen in the neighbourhood of Mangalore on the West Coast. The nature of the cultivation carried on in this part of the country necessitates the use of these animals as the indigenous cattle are small and insignificant. Buffalo racing forms one of the great amusements of these people, and every rich Bant keeps his "Kambla" field sacred to buffalo racing, for the details of which I am greatly beholden to Mr. E. Thurston. The best pairs of buffaloes used for this purpose are valued up to Rs. 500, and are splendid animals, and, except for occasional plough drawing, are kept for racing all the year round

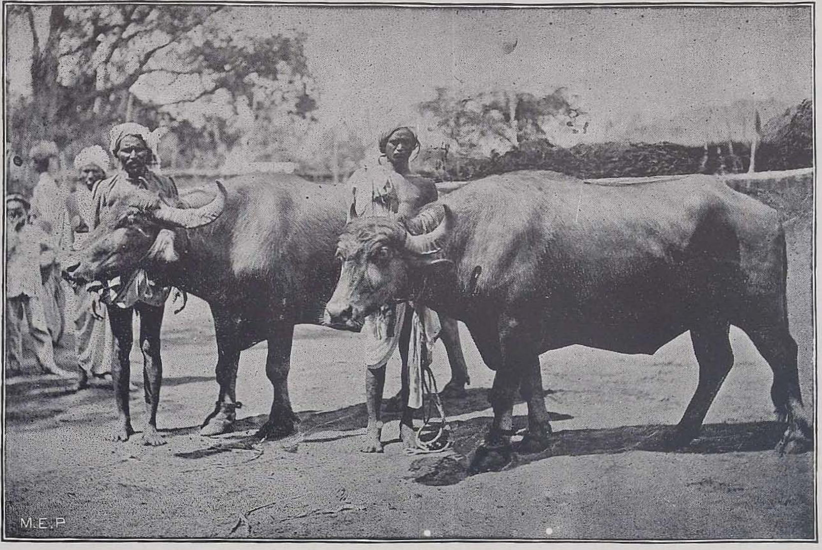


West Coast Buffalo Bull.

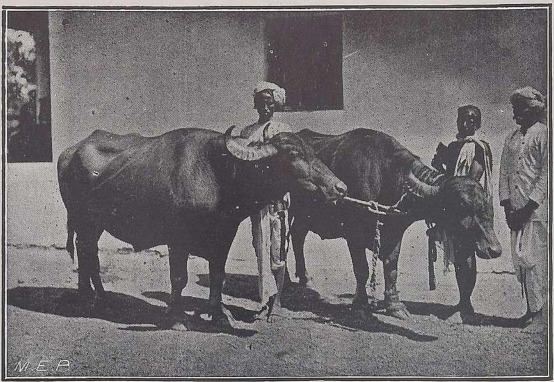


Parlákimidi Buffalo.

Parlákimedi Buffalo Cow.



Pair of Parlákimedi Buffaloes.



Parlákimedi Buffaloes.

Each pair of buffaloes runs the course alone and is judged by the assembled crowd for pace, style, and most important of all, the height and breadth of the splash which they make. Sometimes a kind of gallows, perhaps twenty feet high, is erected on the course and there is a round of applause if the splash reaches up to or above it. The course is generally a wet paddy field about 150 yards long, full of mud and water. The driver stripping himself to the necessary minimum of garments mounts a little flat board about 12 by 18 inches, on which is a small elevation or stool. His friends hold on to the buffaloes for all they are worth, and he places one foot on the stool and one on the pole attaching the so-called car to the yoke, his whip is held aloft in one hand, and one of the buffaloes' tails in the other. He has no reins. In this way he comes down the course shouting with all his might with the plank on which he stands throwing up a sort of Prince of Wales' feather of mud and water round him. They have frequent spills, but the falling is quite soft and it is seldom that any one comes to grief. Marks are given for the pace, style, sticking to the plank and throwing up the biggest and widest splash. At a big meeting perhaps a hundred pairs will be entered brought from all the surrounding country and the big men always send their buffaloes to the races headed by a local band.

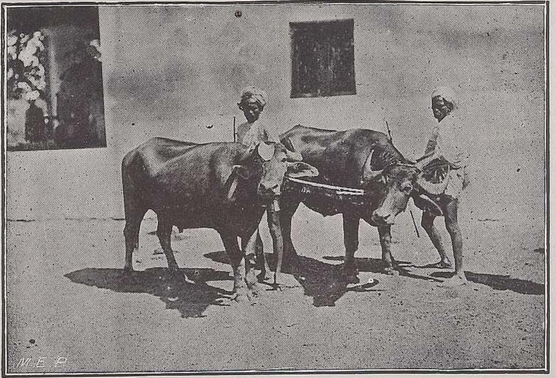
Parlakimedi Buffaloes.

Three distinct breeds of buffaloes are found in this part of the Ganjám district, namely, the "Desi" or "Manda," the "Jerangi" and the "Pedda Kimedi" breed. The buffaloes commonly met with are of the "Desi" or "Manda" breed. They are larger than the animals found elsewhere in the district, and some of them

are imported from the Kalahandi State. In colour they are dark grey. The buffaloes of the "Jerangi" breed are smaller, and have short horns and short tails. They are noted for their hardiness and smartness; and they are somewhat darker than the "Desi" breed. Jerangi is in the Parlákimedi Maliahs, and it is here where most of these animals are bred.

The "Pedda Kimedi" buffaloes are much larger and stronger than those of the Desi and Jerangi breeds. They cannot however stand the sun so well, but are exceedingly useful for slow heavy work. It appears from such information as is available that they are brought by the Pedda Kimedi people from Kalahandi and other parts of the Samalpur district of Bengal, and are not bred in Pedda Kimedi. Cow-buffaloes of "Jerangi" and "Pedda Kimedi" breeds are rarely met with outside their native borders, as they do not fare so well, nor do they yield as much milk as they generally do when found in their native tract, on account of change in food. These two breeds are not therefore very frequently met with outside their own country, and apparently no attempt is made to produce a mixed breed with "Desi" cows and "Jerangi" or "Pedda Kimedi" bulls.

Buffaloes are largely used for agricultural purposes, and for heavy draft work which the bullocks of these parts are incapable of performing. On the Parlákimedi Estate the ryots keep a far larger number of buffaloes than bullocks, as the former are the more useful for preparing land during the rains for transplantation of paddy. No special care is taken, nor is it necessary to provide pasture for the animals, as, in addition to the grazing lands and the cultivated lands after the crops are cut, plenty of fodder (paddy straw) is available in every village throughout the year, and this with rice bran,



Gódávari Buffaloes.

Gódávari Buffalo.

horse gram, and gingelly oil-cake, which is generally given, is sufficient to sustain the animals in good condition. What is absolutely necessary in regard to these animals is that they should be washed twice daily. Young bulls sell from Rs. 30 to Rs. 100. A good cow is worth from Rs. 25 to Rs. 60 according to the milk she yields. A cow-buffalo is generally considered to be one of the requisites of a family, as she helps to support the family by yielding plenty of milk and ghee. A good cow-buffalo gives from 12 to 18 lb. of milk daily.

Several poor families earn their livelihood solely by maintaining one or two cow-buffaloes and selling milk-curd, buttermilk and ghee. The regular dealers in milk and ghee who are called "Gowdus" maintain herds of cow-buffaloes. The herds do not contain very many fine specimens. These are always kept outside villages and towns, and live on the grazing they can get in fields and jungles. They are not given any rice bran, horse-gram, oil-cake, etc., and are rather wild. There are weekly fairs held at Uppalada and Balada where some very fine animals are brought for sale. Many animals are purchased for export to other taluks in the district, and also to the adjoining districts. The following are some of the signs which are believed to be good in a cow-buffalo:—

(1) The head should be small.

(2) The back should be low.

(3) Fore legs should be shorter than the hind legs.

(4) Horns should be formed in such a curve so as not to allow water which may be poured over them to fall on the hoofs of the fore legs when the animal is standing.

The chief feature that is looked for, and to which much importance is attached in the bull-buffaloes is the

formation of the horns. If the two horns are of equal length bending backwards with tips facing each other, this is considered to be a good specimen. An animal that stretches out its tongue and turns it from side to side is said to have "*Pamu Naluka*" (snake tongue) and is considered to be destructive to the owner. So also is the animal which strikes, with its horns, the post to which it is tied, the action being called "*Kommu Kottadam*" (horn-beating).

Particulars (place, time, etc.) of Cattle Fairs held during 1906–1907 in the Madras Presidency.

District and taluk.	Name of place or village.	Month.	Approximate number of cattle.	Different breeds brought for sale.	Remarks.
Ganjám ...	Berhampur	February	1,000	Goomsur and mixed breeds.	
Gódávari ...	Draksharama cattle fair	Every Monday	500	......	
	Cocanada do.	Every Sunday	100	. ....	
	Pithápur do.	Every Saturday	2,500	......	Annual cattle show, March.
	Yelésvaram do.	Every Thursday	200	......	
	Tuni do.	Every Sunday	320	......	
Kistna ..	Ellore do.	March	...	Principally Ongole and Kistna.	Annual cattle show, February.
	Palacole do.	Every Saturday	1,400	......	
	Undi do.	Every Tuesday	200	Principally Ongole and Kistna.	
	Pentapad do.	Every Sunday	800	......	
Guntúr ...	Ongole cattle show	March	1,200	Pure Ongole	A splendid selection of bulls and cows.
Bellary ..	Mylar cattle fair	30th January 1907 ...	1,000	......	
	Kuruvalli do.	12th February 1907 ...	10,000	......	
	Chitwadigi do.	Every Saturday	25 to 30	Ongole and Mysore ...	

Particulars (place, time, etc.) of Cattle Fairs held during 1906-1907 in the Madras Presidency—cont.

District and taluk.	Name of place or village.	Month.	Approximate number of cattle.	Different breeds brought for sale.	Remarks.
Bellary—*cont.*	Adóni cattle fair ...	Every Friday	180	......	
	Kosigi do. ...	Every Tuesday	230	......	
South Arcot ...	Tiruvannámalai do. ...	Prohibited	..	......	
	Tennanai do. ...	Every Tuesday	...	......	
	Kilpennathur do. ...	Every Thursday	200 to 500	......	
	Vattavalam do. ...	Every Wednesday ...	100	......	
	Mailam do. ...	Every Sunday	400 to 500	......	
	Do. do. ...	Every month	500	......	
	Ginjee do. ..	Every Friday	300	......	
	Ongur do. ...	Every Tuesday	500	Mysore and Kangayam.	
	Brahmadesam do. ...	Every Thursday	...	......	
	Valatti do. ...	Every Sunday	40	......	
	Tívenúr do. ...	Every Monday	...	......	
	Kottattai do. ...	1st May 1907	1,000	......	
	Kattuparur do. ...	Every Sunday	100 to 300	......	
	Kuvagam do. ...	Prohibited	...	......	
	Parikal do. ..	Do.	..	......	
	Vandipálaiyam do. ...	Every Tuesday	10 to 15	......	
Vizagapatam ...	District Agricultural Association show changed annually.	February	1,000	East Coast breeds and buffaloes	

Salem ...	Méchéri car festival fair	27th February to 2nd March 1907.	...	......	
	Nangavalli car festival fair ...	27th February to 2nd March 1907.	500	......	
	Berikai cattle fair	Not held	...	......	
	Adamankotah Jatra fai	1st to 10th April 1907 ...	1,000	Kangayam.	
	Nathapatti cattle fair	29th April 1907	500	......	
	Kunchi Amman Jatra fair ...	16th to 23rd January 1907.	100	......	
Coimbatore ...	Tiruppúr	une	1,500	Kangayam and Mysore.	Annual cattle and pony show. Ponies are brought to the fair.
Trichinopoly ...	Samayavaram Ekadasi festival cattle fair.	January 1907	2,500 pairs or 50,000,	......	
Madura ...	Madura cattle fair	End of April 1907 ...	15,000	Kangayam and Mysore breeds.	
	Attur do.	19th to 23rd March 1907.	9,000	Pallikulam breeds.	
	Palni do.	1st to 3rd February and 29th March to 5th April 1907.	1,500	......	
Tinnevelly ...	Muthulapuram cattle fair ...	6th to 31st July 1906 ..	15,000	......	
	Adi Tapasu fair at Sankaranayinárkóvil.	3rd August to 3rd September 1906.	5,000	......	
	Tiruchendur cattle fair	17th to 31st August 1906.	2,000	......	
	Timmarajapuram cattle fair ...	22nd September to 14th October 1906.	2,500	.....	

Particulars (place, time, etc.) of Cattle Fairs held during 1906–1907 in the Madras Presidency—cont.

District and taluk.	Name of place or village.	Month.	Approximate number of cattle.	Different breeds brought for sale.	Remarks.
Tinnevelly—*cont.*	Taipusam fair at Kazhugumalai	26th January to 9th February 1907.	12,000	......	
	Masi fair at Tiruchendur	25th February to 17th March 1907.	8,000	Mysore and Pallikulam breeds.	
	Panguni Uttiram fair at Kashugumalai.	26th March to 8th April 1907.	2,000	......	
	Panguni Uttiram fair at Virudupatti.	15th March to 25th April 1907.	2,000	......	
	Chittrai fair at Sivalaperi ..	11th to 30th April 1907.	15,000	Alambadi, Kangayam and local breeds.	
	Vaikasi fair at Azwartirunagiri ...	23rd May to 8th June 1907	3,000	.. ...	
Malabar ...	Kizhur fair	9th to 19th December 1907.	10,000	......	
	Kodaramba fair	In abeyance	...	......	
South Canara.	Kulgunda fair	Do.	...	......	
	Subramania fair	November	Very large collection of cattle.	......	

Particulars (place, time, etc.) of Cattle Fairs held in the Province of Mysore.

District and taluk.	Name of place or village.	Month.	Approximate number of cattle.	Different breeds brought for sale.	Remarks.
Kolar district.					
Kolar ...	Vakkaleri	February	16,000	Nearly all of Mahadeswarabetta breed; Nandi and Mastidana and "Nadudana."	
	Vanarasi	April	15,000		
Sidlaghatta ...	Mailur	Do.	10,000		
	Talakayalabetta	February	4,000		
Bowringpet ...	Bowringpet	May	5,000		
	Tornahalli	February	5,000		
Malur ...	Chiktirupati	April	7,000		
	Chalaganahalli	Do.	4,000		
	Bhupatemmanabetta	Do.	10,000		
Mulleagal ...	Avani	March	15,000		
	Yaldur	May	10,000		
Chikballapur.	Nandi	March	18,000		
Tumkur district.					
Koratageri ...	Srikyamanahalli	January	3,000	Mahadeswarabetta a d Hallikar breeds and a few of Pavgada breed.	

Particulars (place, time, etc.) of Cattle Fairs held in the Province of Mysore—cont.

District and taluk.	Name of place or village.	Month.	Approximate number of cattle.	Different breeds brought for sale.	Remarks.
Tumkur district —cont.					
Pavgada ...	Nagalmadiké	January	3,000	Pavgada breed, a few of Mahadeswarabetta breed and "Nadudana."	
Shimoga district.					
Honnali ...	Rampur	February	6,000	Mahadeswarabetta, Chitraldroog, Amrat Mahal and "Nadu."	
Mysore district.					
Yadatore ...	Chunchanakatté	January	7,000	Hallikar, Bettadapur, Metikuppé and Mahadeswarabetta breeds and Nadudana.	

Bangalore distric				
Nelamangala.	Sivagangé	March or April	5,000	Mahadeswarabetta, Masti, Nandi and "Nadu."
	Gollahalli	April	6,000	
Hoskote ...	Jadigenahalli	March	3,000	
Dodballapur ...	Subrayankanne	January	30,000	Mahadeswarabetta, a few Hallikars and "Nadu."
Anekal ...	Huskur	April	5,000	
Magadi ...	Magadi	Do.	3,000	